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Incorporating *International Commerce*

OCTOBER 30, 1972

A UNITED STATES DEPARTMENT OF COMMERCE PUBLICATION

Commerce Today

Coming Developments in Business and Technology

U.S.-Soviet Trade Enters A New Era

Newsmemo

U.S. exporters to Australia can testify that the worldwide push toward the metric system is moving ahead. Australia is making the changeover in a series of steps over a five-year period. Requirements for marking of certain packages and revision of the customs tariff to show metric equivalents have already taken effect. Dates for conversions of specifications across the commodity-industry spectrum have already been set.

Meanwhile, in the U.S., the term "intensive study" can be applied to metric activity. Getting ready for possible U.S. changeover, the academic world is scheduling seminars for industry's research, design and manufacturing engineers. In cooperation with Commerce's National Bureau of Standards, the Universities of Kentucky, Minnesota and Wisconsin have already had seminars, and the next is due at George Washington University Nov. 13-15. For registration details, write Continuing Engineering Education Program, George Washington U., Washington, D.C., 20006.

"Our businessmen abroad can provide valuable insights to the Federal Government as it works to improve our international trading position." That is the message of President Nixon to a group of leaders of the Chamber of Commerce of the U.S. who toured 10 European cities this month to talk over trade matters with the local AmChams--American Chambers of Commerce. The President has asked for a report on findings of the trip.

Another team from the business world has been at work across the Atlantic this month to assist U.S. trade. This is a group of food processing specialists that has been holding technical seminars in Tehran, Ankara, Athens and Oporto to share the best in U.S. technology with industrialists in those cities. The Food Processing Machinery and Supply Assn. and the Dairy and Food Industries Supply Assn. sponsored the venture in conjunction with the Commerce Department.

Use more coal to give us time as well as energy. So urges American Metal Climax's Ian MacGregor when he suggests a national energy policy "to maximize the use of coal as the principal and largest U.S. source of non-nuclear fuel to give us the time for transition to the nuclear age." MacGregor notes National Petroleum Council projections that it would cost $15 billion to effect an approximate doubling of coal production by 1985--$9 million for coal facilities and $6 billion for better coal transport. But over the same period it would cost ten times as much to fill the capital expansion needs foreseen by the NPC for domestic oil and gas production, oil refining, and oil and gas transport.

A visible thumbprint in seconds on the back of a check--a partner against fraud for groceries, liquor stores, airlines and other businesses that frequently cash checks. The compact device that produces it is designed and produced by Identicator Corp., Torrance, Calif. It "dusts" an ordinary, uninked thumbprint to make it quickly visible and discourage bad check passers while providing positive personal identification. Customers are not inconvenienced. The prints are admissible in courts as legal evidence.

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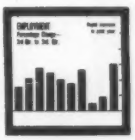

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COVER: *Following the signing of the U.S.-USSR trade, credit and lend lease accords, the men principally involved in the negotiations visited President Nixon in his White House office to report their actions. Shown from left are: Nikolai S. Patolichev, Soviet Minister of Foreign Trade; Secretary of State William P. Rogers; and Commerce Secretary Peter G. Peterson. Story begins on Page 4.*

ECONOMIC
HIGHLIGHTS

Vigorous Growth In Jobs Over Past Year Brings Significant Drop In Unemployment

Economic Highlights is prepared by Dr. Harold C. Passer, Assistant Secretary for Economic Affairs, and is based on the latest economic indicators (see charts on adjoining page).

The rapidly expanding economy has generated about 2½ million jobs over the past 12 months and brought a significant reduction in the rate of unemployment. Moreover, continued improvement in the job picture is expected in the months ahead.

As the first chart shows, the civilian labor force has grown at the extraordinarily rapid rate of nearly 3 percent in the past year. Over the past four years the average annual increase has been nearly 2½ percent, compared with 1½ percent annually in the preceding eight years. In the past four years, the number of persons in the civilian job market has increased by 7½ million compared with slightly less than 6 million in the preceding four-year period.

The yearly increases in the number of people seeking employment have been much larger in recent years than the long-term average because (1) an unusually high percentage of the population is composed of young people who were born during the baby boom of the late 1940s and 1950s and who have reached working age in the past several years, and (2) the Armed Forces has been reduced by about 1.2 million over the past four years as our large ground force in Vietnam was dismantled.

One of the prime objectives of President Nixon's New Economic Program, initiated in August last year, was the creation of jobs at a faster rate to accommodate this rapidly growing labor force. Further stimulus was applied to the economy, resulting in one of the strongest periods of economic growth in many years and the creation of 2½ million jobs over the past 12 months.

The unemployment rate was around 6 percent in 1971 and it stayed close to 6 percent in 1972 until June, when it dropped to 5.5 percent. It remained at that level in the third quarter.

Some special factors, in addition to the rapid growth of the labor force, were responsible for the slow response of the unemployment rate in 1971. For example, in 1969-71, employment in defense industries fell by nearly a million. While many of these workers have been absorbed by expansion of other industries, such a massive shift cannot be accomplished in a short time.

Also, the increasing percentage of young people and women in the labor force means that an above-average proportion of jobseekers have not yet acquired the skills and experience needed on many jobs. As the fourth chart indicates, the unemployment rate for men aged 25 and over, historically the bulk of the labor force, is less than for women and for young adults (20-24). The jobless rate for teenagers is normally relatively high, and is now about three times the average rate for all workers.

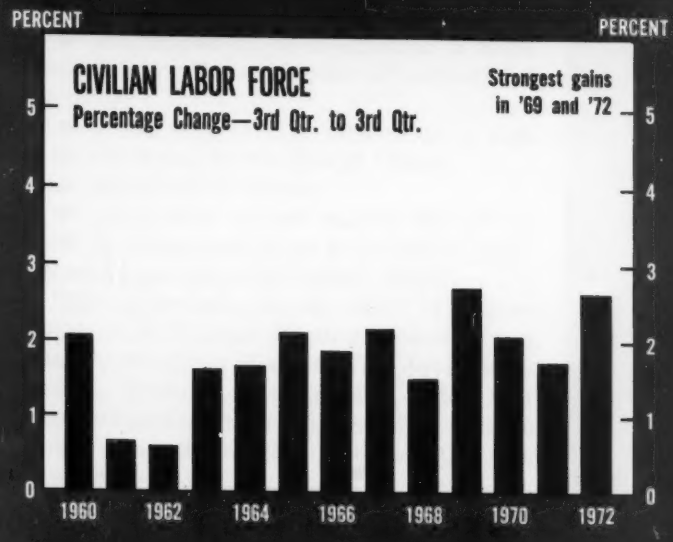
Historically, unemployment rates also have varied among occupational and skill groups. As the chart indicates, these rates are generally lower for workers with higher skills and more experience.

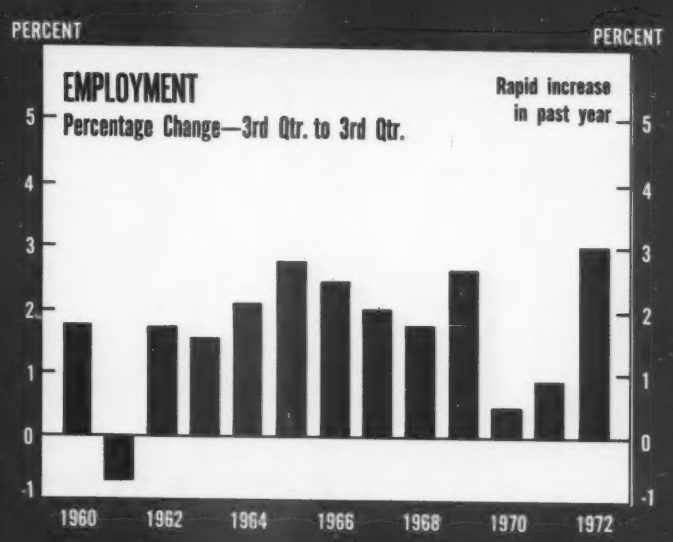
Although unemployment is very difficult to predict with precision, further substantial improvement is likely in the immediate future. Defense activity has leveled off after sharp cutbacks for three successive years. And, most important, the rapidly growing economy, along with programs to alleviate special unemployment problems, will produce further gains in employment.

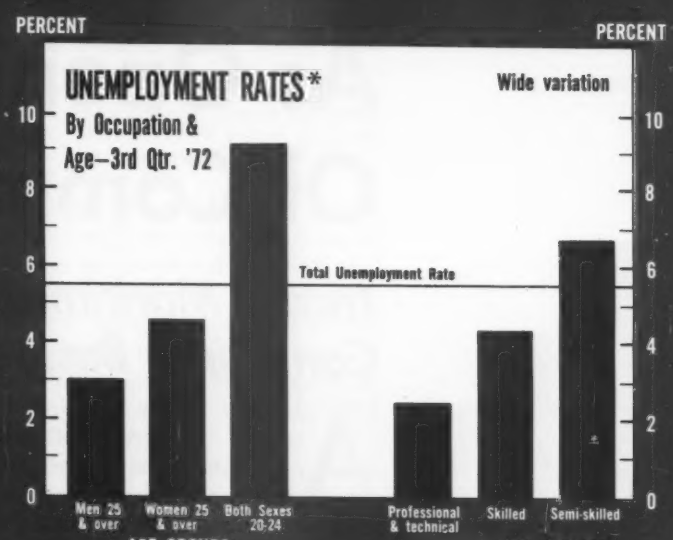
Other economic data

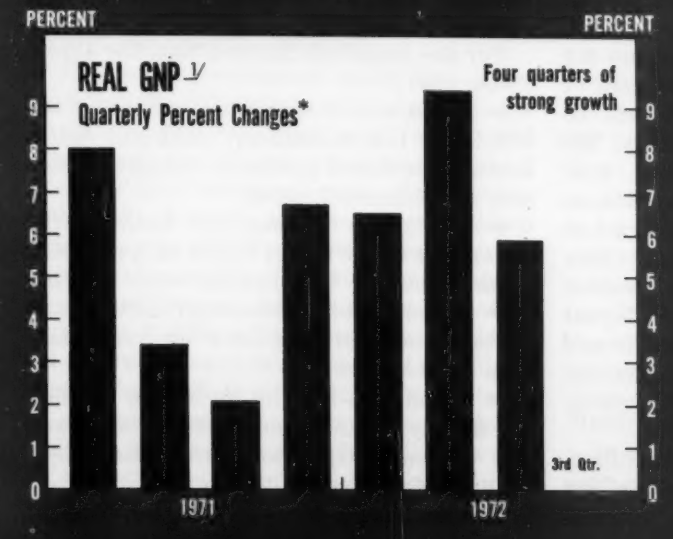
Real GNP scored another good gain in the third quarter and is certain to exceed the target of a 6 percent gain for the year. Industrial production moved up strongly again in September, continuing its sustained uptrend.

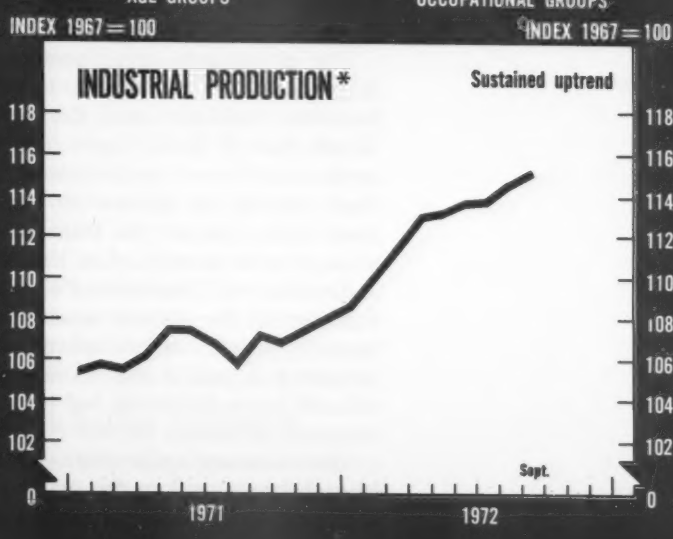
Latest Indicators











1/Annual rate
*Seasonally adjusted

Commerce Today
Vol. III, No. 2
October 30, 1972

U.S.-USSR Pacts Seen As Opening New Era Of Commercial Growth

Trade, Maritime, Credit, Lend Lease Accords Can Triple Business Activity Between Nations

A series of agreements reached this month by the United States and the Soviet Union can mark the beginning of a new era of expanding commercial relations between the world's two largest economies.

The agreements cover general access for traders, extension of credit, improvement of maritime facilities and the settlement of World War II Lend Lease obligations. The trade agreement contemplates that total trade during its three-year period will at least triple that of the 1969-1971 period to an aggregate amount of at least $1.5 billion.

Secretary of Commerce Peter G. Peterson summarized the accords as ending a 25-year break in normal commercial relationships and initiating a period that "not only has significant peace dividends, but very substantial economic dividends for our country."

The Secretary again emphasized that President Nixon's goal in the trade negotiations with the Soviets was to arrive at a "comprehensive" settlement. He asserted: "We believe that the agreement we have now signed is comprehensive enough for us to do some real business. We believe that most of the essential and fundamental problems have been taken care of."

For the American businessman, the agreements offer:

► placement of substantial orders by the USSR for U.S. machinery, plant and equipment, agricultural products, industrial products and consumer goods;

► availability of business facilities for Americans in the Soviet Union on a par with those granted to traders from other nations;

► a large office-hotel-apartment trade center to be built in Moscow for use by foreign businessmen;

► an offer to the U.S. to have a pavilion for display of American products in a trade and economic exposition center, also to be built in Moscow;

► establishment of a U.S. Government

Commercial Office in Moscow and a Soviet Trade Representation in Washington;

► encouragement of arbitration in third countries for the settlement of commercial disputes;

► availability of Eximbank credit to support purchases by the Soviet Union;

► reduction of tariffs;

► safeguards against market disruption;

► improvements in sea transport for shipments to and from the Soviet Union.

The agreements are the result of actions taken at the Summit Meeting in Moscow last May by President Nixon and the Soviet leadership. There it was mutually stated that strengthened commercial ties could lead to better overall relations between the two countries.

At the Summit Meeting, a Joint U.S.-USSR Commercial Commission was established, chaired by Secretary of Commerce Peter G. Peterson for the American side and Minister of Foreign Trade N. S. Patolichev for the Soviet side. The full commission met in Moscow in July and again in Washington in October. Specific work groups of the commission held specific negotiations for several weeks this fall.

President Nixon on Oct. 18 signed a determination making the Soviet Union eligible for credits from the Export-Import Bank of the United States. Secretary Peterson and Soviet Minister Patolichev signed the Trade Agreement. Secretary of State William P. Rogers and Minister Patolichev signed the Lend Lease Agreement. On Oct. 14 Secretary Peterson and Soviet Merchant Marine Minister Timofey B. Guzhenko signed the Maritime Agreement.

Trade agreement detailed

The Soviet Government stated that it expects substantial orders to be placed in the United States for machinery, plant and equipment, agricultural products, industrial products and consumer goods. The Soviets indicated a desire to purchase several million dollars worth of U.S. equipment to manufacture tableware. Also, U.S. firms have applied for export licenses for equipment valued at well over $1 billion in anticipation of bidding on contracts associated with the huge Kama River Truck Plant construction projects. It is estimated that U.S. companies could obtain between $250 million and $500 million worth of the equipment contracts for this project.

Substantial grain purchases are expected to continue during the period of the agreement. Machinery and equipment exports to the Soviet Union are expected to grow substantially. In 1971, electrical and non-electrical machinery accounted for only $60 million or 37 percent of total U.S. exports to the Soviet Union, even though total U.S. machinery exports to all countries in 1971 were $11.6 billion.

SIGNATORY PRINCIPALS — *U.S. Secretary of Commerce Peter G. Peterson (right) shakes hands with Soviet Minister of Foreign Trade N. S. Patolichev as U.S. Secretary of State William P. Rogers looks on. Peterson and Patolichev signed the Trade Agreement; Rogers and Patolichev signed the Lend Lease Agreement, both occurring on Oct. 18.*

Several large scale joint projects are currently under discussion or negotiation. These include industrial installations for the production of polystyrene, metal fasteners, fertilizers, metal mining, and natural gas extraction and transmission.

The United States balance of trade with the Soviet Union has run heavily in favor of the United States—generally by a ratio of 3 to 1. This trend can be expected to continue over the period of the trade agreement resulting in a favorable trade balance in the probable range of at least a few hundred million dollars a year. Furthermore, U.S. exports to the USSR have been much more job-intensive than Soviet exports to the U.S., largely raw materials, which are much less job-intensive.

Most-Favored-Nation treatment

The agreement provides that each country will reduce its tariffs with respect to the products of the other to the level generally

LED NEGOTIATING TEAMS — *Soviet Foreign Trade Minister Patolichev (left) headed the Soviet side in the Joint U.S.-USSR Commercial Commission; Secretary of Commerce Peterson the U.S. side in the Commission.*

applicable to like products of most other countries.

This tariff treatment will require action by the U.S. Congress. The President currently plans to submit such legislation early in next year's session. It is anticipated the trade agreement will not enter into force and its three-year period will not begin to run until such legislation is enacted.

Between 1935 and 1951 such tariff treatment was accorded to the Soviet Union, but it was withdrawn by statute in 1951 during the Korean War. Yugoslavia was not affected by the 1951 statute, and Poland again received nondiscriminatory tariff treatment in 1960. The granting of tariff treatment, at a level generally applicable to like products of most other countries, to the Soviet Union is fully consistent with United States membership in the General Agreement on Tariffs and Trade.

The U.S.-USSR pact has provided an exception for each side relating to natinoal security interests. U.S. export controls are not negotiable and were not, therefore, discussed. However, such regulations have been and will continue to be under review.

Anti-dumping provisions

Through state trading monopolies, the Soviet Union controls both the importation and exportation of all goods. In the Soviet economy, costs and prices do not necessarily play the same role as they do in a market economy. Accordingly, the Soviets have agreed to a procedure under which, after consultations, they will not ship products to the United States which the U.S. Government has advised will "cause, threaten or contribute to disruption of its domestic market." Conversely, in the event the Soviets request limitation of U.S. exports, the U.S. Government is obliged to make such information available to the U.S. business community.

Credit arrangements

Each Government agreed to make available to the other, on a reciprocal basis, trade credit arrangements which are usual and customary in the financing of exports.

President Nixon has, therefore, determined that the Export-Import Bank of the United States may engage in transactions with the Soviet Union. The Soviets have given assurances that the facilities of the Foreign Trade Bank of the Soviet Union and the credit facilities of more than 40 Soviet foreign trade units will be available to American importers.

The Soviets have executed an operating agreement with Eximbank which provides that with respect to all matters—amount of credit, interest rate, repayment provisions—they will be treated in the same manner as any other country. Eximbank policies concerning private participation in credit facilitation will apply, and all credits in excess of $10 million will be subject to the usual review by the National Advisory Council.

Official commercial offices

The trade agreement provides that the United States may establish a governmentally-sponsored Commercial Office in Moscow to be operated through the U.S. Embassy there. The Soviets will be permitted to establish a Trade Representation in Washington.

The U.S. Commercial Office in Moscow will provide the U.S. business community with up-to-date information on Soviet markets, facilitate introductions of U.S. businessmen to the appropriate Soviet ministries, provide such facilities as bilingual stenographers and communications and provide critical expertise in advising U.S. businessmen in making their sales and purchases. Because members of the Soviet Trade Representation will have diplomatic immunity, they will not be permitted to negotiate or execute transactions.

U.S. businesses, as is the case with all foreign firms, may not establish a permanent office in Moscow with the power to hire local personnel and the right to receive office space, facilities and housing without accreditation by the Soviet Government.

Until very recently, only two U.S. firms, both engaged in the travel and tourism industry, were accredited. Since the official negotiations were commenced, two industrial firms have been accredited, and the Soviets have agreed that they will continue to accredit U.S. firms on a basis no less favorable than that accorded firms of any third country.

Any problems arising out of these accreditation procedures will be resolved through the Joint Commercial Commission. The Soviets have given written assurances that U.S. accredited companies will be authorized to employ Soviet personnel, acquire needed telephones, telex equipment and other such communications facilities promptly, import promptly needed equipment such as typewriters, calculators, dictation and copying equipment and automobiles and personal items such as furniture and appliances, have access to suitable housing and receive prompt processing of visa requests.

Moscow business complex planned

The Soviets also have said they will construct a large office-hotel-apartment trade center in Moscow. It is contemplated that the trade center will contain a substantial number of company offices, first class hotel rooms and apartments and related support activities. The center will be the first of its kind in the Soviet Union and is expected to be in full operation in the next few years. The Soviets will invite United States companies to make proposals and cooperate in the financing and construction of the trade center.

The Soviet Government is also planning to construct a trade and economic exposition center and has offered to lease a pavilion to the United States for display of American products. The U.S. will assist the Soviets in establishing in New York a Soviet office for the purpose of purchasing American equipment for use in the Kama River truck plant.

Arbitration procedures

For the last 40 years the Soviets have had a policy of encouraging arbitration under the auspices of the Foreign Trade Arbitration Commission in Moscow, which is composed of 15 Soviet nationals. Arbitration in a third country was agreed to by the Soviet foreign trade organizations only if the Western firm demanded and was able to negotiate a third country provision in the purchase or sale contract. By contrast, the rules of the American Arbitration Association provide that where a party to an arbitration proceeding is not an American, he has a right to have the controlling arbitrator be from a third country.

COMMISSION AT WORK—*The Joint U.S.-USSR Commercial Commission met in Moscow in July and Washington in October. At the Washington sessions, at the Department of Commerce, the U.S. members are on left of table, the Soviet members on right.*

The trade agreement encourages settlement of commercial disputes by arbitration under the Arbitration Rules of the Economic Commission for Europe, a United Nations agency, in a country other than the Soviet Union and the United States with arbitrators appointed by an authority in a country other than the Soviet Union and the United States. Parties to contracts, however, are free to decide on any other means of arbitration "which they mutually prefer and agree best suits their particular needs." In addition, U.S. firms are guaranteed the right to use the processes of Soviet courts, and comparable Soviet organizations are assured similar access to U.S. courts.

Copyright, tax treaties

Significant progress was made on both the copyright and tax treaty issues and work is continuing on both scores in special work groups in each of these subjects. It is expected that additional major progress on these issues will be made prior to the next commission meeting.

Commercial relations between the two

countries will continue to be monitored by the Joint Commercial Commission. The U.S. delegation on the Commission is chaired by Peter G. Peterson, Secretary of Commerce, and is composed of James T. Lynn, Under Secretary of Commerce as Vice Chairman; Jack F. Bennett, Deputy Under Secretary of Treasury; Willis Armstrong, Assistant Secretary of State; and Andrew E. Gibson, Assistant Secretary of Commerce, as members, James L. Mitchell as General Counsel, and Steven Lazarus as Executive Secretary.

Lend Lease details

With regard to the Lend Lease issue, it was noted that the outstanding Soviet obligations have been a deterrent to U.S.-Soviet commercial relations since World War II. Negotiations that were conducted immediately after the war, in 1951 and in 1960 all ended in failure.

The Lend Lease statute gives the President full power to settle the obligations within very broad limits. The agreement under which Lend Lease aid was extended to the Soviets followed other similar agreements in providing only the most general language concerning how contributions to the war effort by each side were to be settled. Consequently, the actual 1945 settlement with the British, the principal beneficiaries of Lend Lease aid, provided the guidelines for the settlement with the Soviet Union, which received about half as much aid as the British, but more than five times as much as any other country. The principal issues were the amount of the total settlement, whether and how much interest should be charged, the length of time for repayment, a grace period and a right to postpone annual installments under certain conditions.

Negotiations were complicated by the length of time which had elapsed since World War II, the difference between current interest rates and those prevailing at the end of World War II, and the fact that Soviet products have been subject to higher tariff levels during the intervening period than have the products exported to the U.S. by the British.

Outstanding Soviet Lend Lease obligations will be settled by the payment by the Soviets to the United States of an amount of at least $722 million payable over the period ending July 1, 2001; $12 million was paid on Oct. 18; $24 million will be paid July 1, 1973, and $12 million July 1, 1975. The balance will be paid in equal annual installments commencing on a date which depends upon when nondiscriminatory tariff treatment becomes available for Soviet products. The exact total amount will depend upon when and how many of the four allowable annual deferments are taken by the Soviets, since such deferments will bear interest at the rate of 3 percent per annum and could total an additional $37 million. Deferments, if taken, will nonetheless be repaid by July 1, 2001.

Maritime Agreement Led The Way

The maritime agreement has been characterized by Secretary Peterson as "another necessary link in the establishment of an expanding commercial relationship with the Soviet Union." The negotiations which culminated in the maritime agreement were initiated in the latter part of 1971, and have been the subject of a series of meetings in Washington and Moscow throughout 1972.

The Agreement has two basic objectives: first, to open the channels of maritime commerce between the two nations by opening major U.S. and Soviet commercial ports to calls by specified kinds of U.S.-flag and Soviet-flag vessels; and, secondly, to afford to U.S.-flag vessels and Soviet-flag vessels the opportunity to participate equally and substantially in the carriage of all cargoes moving by sea between the two nations.

Under the port access provisions of the Agreement, 40 ports in each nation are open to access by vessels of the other nation upon four days' advance notice to the appropriate authorities. The selection of the ports was based on commercial considerations, reasonable reciprocity and protection of national security interests. While the four-day notice requirement is more than the normal 24-hour notice period applicable to commercial vessels, it is substantially less restrictive than the 14-day advance request requirement now applied by the United States to Soviet vessels and the 14-day advance request required by the U.S.S.R. for U.S. vessels. Entry of vessels to ports not specified in the Agreement will continue to be permitted in accordance with existing rules and regulations, i.e., the 14-day

prior request provisions will still apply. Maritime training vessels and hydrographic and other research vessels may enter the ports only for purposes of resupply, rest, crew changes, minor repairs and other services normally provided in such ports.

In addition, the Agreement contemplates the access initially of 81 U.S. and 50 Soviet vessels engaged in hydrographic, oceanographic, meteorological or terrestrial magnetic field research of a civilian nature. The Agreement does not include vessels engaged in fishing or related activities since these matters are covered by separate agreements, nor does it include warships or vessels carrying out state functions other than those mentioned above. It is not intended to cover any liquefied natural gas trade which may develop between the nations.

The Agreement does not involve any concessions in the policy of the United States with respect to ships which have called on Cuban, North Vietnam or North Korean ports. Soviet vessels which have called or will call on Cuba, North Vietnam, or North Korea will not be permitted to bunker in U.S. ports and Soviet vessels which have called on Cuba or North Vietnam will not be permitted to load or unload in U.S. ports government-financed cargoes such as grains sold on Commodity Credit Corporation credit terms.

Cargo provisions

The cargo carriage provisions of the Agreement set forth the intention of both governments that the national-flag vessels of each country will each carry equal and substantial shares of the oceanborne commerce between the two nations. At the same time the Agreement recognizes the policy of both the United States and the Soviet Union with respect to participation in its trade by third-flag vessels.

The intention that a substantial share of the trade between the two nations will be carried by each national flag merchant marine is defined as meaning that the national-flag vessels of each nation will have the opportunity to carry not less than one-third of all cargoes moving in whole or in part by sea between the two nations, whether by direct movement or by transshipment through third countries. In the case of grain shipments, the one-third requirement is to be applied retroactively to all shipments since July 1, 1972.

The opportunity for carriage of equal and substantial shares of the trade between the two nations by national-flag ships is to be assured by the routing of controlled cargoes, i.e., cargoes with respect to which entities of either government have the power to designate the carriage. On the U.S. side, this includes only those cargoes which are subject to U.S. government control under our cargo preference laws. On the Soviet side, all exports and imports for which entities of the U.S.S.R. have or could have the power at any time to designate the carrier are included.

Commercial consideration

Recognition has been given to the practical commercial consideration that vessels of either nation may not be available to carry the amount of cargo to which they are entitled under the principles of the Agreement. Under such circumstances, a limited variance from the equal and substantial sharing rules is provided. Such variance is permitted where the cargo was offered on reasonable terms and conditions and where the unavailability of national-flag carriers is certified by a representative of the U.S. Maritime Administration or U.S.S.R. Ministry of Merchant Marine, as the case may be. Even though unavailability has been certified by the appropriate representative, there is still an obligation to continue to offer controlled cargo to restore the one-third share if possible within the same calendar year.

The matter of freight rates to be paid to U.S. vessels is an important provision of the Agreement. With respect to liner service, U.S.-flag carriers should face no significant problems because U.S. vessels can participate in this trade under the conference-rate system with the assistance of the U.S. operating subsidy program. Rates for shipment of bulk cargo, such as grain, however, present a different situation. Bulk cargo is shipped in world trade under charter rates which are set in competition with ships of nations with far lower costs than American ships. The United States has never before had a subsidy system which permits its vessels to compete in the bulk grain trade, although such a subsidy system was legislatively authorized in 1970. In lieu of a subsidy system for bulk cargo, there were regulations which required shipments of grain to the Soviet Union to move 50% in U.S.-flag vessels. This, however, never resulted in significant carriage for U.S. vessels. Freight rates are a substantial part of the cost of grain and without subsidy the rates charged

HISTORIC MOMENT — *Soviet Merchant Marine Minister Timofey B. Guzhenko (left) and U.S. Secretary of Commerce Peterson on Oct. 14 sign the Maritime Agreement, first of a series of agreements between the United States and the Soviet Union.*

by U.S. flag carriers increased the cost of grain beyond the level buyers were willing to pay.

Under the Agreement, the two governments have worked out rate provisions for two categories of bulk cargo to be carried by U.S. vessels.

For nonagricultural bulk cargoes, the Agreement in essence provides that American vessels shall be paid in each year the average of the freight rate for that category of cargo on the route in question over the prior three calendar years.

The other and far more important category of charter rates is for agricultural commodities and products. With respect to these cargoes the Soviet Union will offer to United States vessels the *higher of:*

- a rate computed on the 3-year average formula described above for the years 1969, 1970, and 1971. This rate for the route most expected to be used for the current grain sales is $8.05 per ton for wheat and other heavy grains, or
- 110 per cent of the current market rates for the shipment involved.

In addition to these provisions, for agricultural cargo the Soviet Union has also agreed to terms relating to unloading ships in the Soviet Union which are more favorable to United States vessels than would otherwise apply in this trade. Maritime experts estimate these special terms represent a reduction from typical rates of at least $1.75 per ton.

Although the term of the maritime agreement is three years, these special provisions for rates on agricultural cargo apply only through June 30, 1973, by which time the parties will negotiate future rates. This will permit review of the actual workings of this rate system near the close of the current unusual grain shipment season.

Although not part of the Agreement, a necessary part of achieving its objectives is that the United States pay a subsidy to its own vessels in the carriage of agricultural cargo. This is not a financial advantage to the Soviet Union since it could carry all this cargo in its own vessels or third-flag vessels at lower costs than it will pay United States vessels. The combination of higher than market charter rates, and favorable terms for unloading, afforded U.S.-flag vessels, reduces the subsidy costs.

Subsidy system

The subsidy system, to be published shortly, is authorized under the Merchant Marine Act of 1970. In order to keep the subsidy at a minimum, it has basically been designed to create no more than a break even situation at $8.05 for most ships which will be likely to participate. The estimated subsidy paid to vessels carrying agricultural cargo under the Agreement will be in the range of $8.00 to $10.00 a ton, if market rates stay in the range of $9.00 to $11.00 a ton, which compares to the current subsidy of about $19.00 per ton on PL-480 grain shipments.

Among provisions limiting the subsidy paid for movements under the Agreement will be the following:

- where market rates exceed the $8.05, all of the excess paid by the Soviet Union over market (i.e., 10% premium) is used to reduce the subsidy;
- when the market rate is $9.00 or more, a substantial part of the amount over $9.00 will be used to reduce the subsidy;
- each subsidy contract will have a renegotiation clause to ensure that no excess profits are made.

The exact amount of subsidy which will be involved with respect to carrying the American share of the grain cargo is difficult to predict with precision because it depends on factors such as: (1) the volume of the Soviet grain trade actually carried by U.S. ships (which will be reduced to the extent that more attractive carriage is available such as PL-480 or oil); (2) the level of market rates, since the U.S. subsidy paid will be substantially reduced as market rates go up.

Productivity Unit Seeks Answers To Perplexing Concept

National Commission Studies Work Motivation; More Data Called Key To U.S. Solution

John Q. Citizen may have a chance to learn what productivity is all about.

His chance may evolve from one of the new directions that the National Commission on Productivity is expected to take as a result of a high-level meeting in Washington late last month.

The National Commission on Productivity has gone into action, delving into questions of work motivation, measurement of productivity, improvements in productivity in the public sector and other areas of one of the economy's most perplexing subjects.

In its first session under its new chairman, Commerce Secretary Peter G. Peterson, the panel agreed generally on a vigorous new direction that will include exploration of areas of productivity where current data are scarce and fragmented—if not completely nonexistent—and where effective methods of measuring productivity are in research.

The new direction also includes a massive educational program which may bring a $10 million commitment from the Advertising Council to explain productivity to the average consumer, and worker.

John M. Stewart, the Commission's new executive director, outlined a work program which includes six major points and announced the formation of subcommittees within the Commission to parallel each work point with leadership, direction and professional input.

Stewart's work agenda includes:

- **An economic overview of productivity's role in growth for the citizen.** Compilation of a book containing a good summary of what productivity is about, what role it plays in growth, in employment, competitiveness and jobs—in other words, what it means to each of us—whether we know it or not.
- **State, county and city assessment**

teams—starting with, perhaps, five regional measurement seminars and concentrating sections of them on solid waste, welfare, police, education, highway and health. From the five regional seminars would emerge about four state teams. These would work on how to develop a measurement system at the state government level. Four teams would be established at the county and city levels, to capitalize on some of the work already done by local governments.

• **Private sector.** Establishment of perhaps three or four teams with one man from the Commission staff to help organize and run the team. The balance of the membership would come from industry, labor and the universities. They would work six months and the end result would be a set of legislative possibilities, executive branch possibilities, management practice changes, and labor changes that would increase productivity.

"Perhaps the role of the Commission in the private sector should be to identify those rules and regulations that impede productivity enhancement," Stewart commented.

• **Motivation and attitude.** Funding a comparative project on assembly line attitudes.

"There is a real question at the present time about what is the relationship between job satisfaction and motivation and productivity," Stewart said, "We are essentially in the research stage on that question."

• **Education.** This would include the Advertising Council campaign and an opportunity, working through an established organization, to run seminars and produce articles.

• **General guide.** Because of the shortness of insights into productivity, the Commission could assemble a useful general guide on what needs to be done.

Representatives of the Campbell-Ewald Co. told the Commission it is recommending to the Advertising Council that a campaign on the subject of productivity be approved.

The Advertising Council appointed the Detroit-based firm to do a feasibility study to determine whether productivity could be successfully presented to the general public through the medium of advertising. If the results of the study were positive, the Council said it was prepared to recommend that its media members commit space and time with a substantial retail sales value of approximately $10 million to the Commission.

Don Bradford and Dick Canber of Campbell-Ewald reported that they completed an interview with more than 100 wage earners to obtain direction, and presented some exploratory ideas. They concluded that productivity could be effectively presented through advertising.

OUTLINES WORK—*John Stewart, executive director of the Productivity Commission, is shown at meeting where he outlined work schedule.*

The Commission heard presentations on trade, growth and productivity from Dr. Ed Allen, Deputy Assistant Secretary of Commerce for Planning and Research, and Dr. Harold C. Passer, Assistant Secretary of Commerce for Economic Affairs.

Passer noted that productivity gains have been and will continue to be the major sources of increases in the standard of living. For example, from 1950 to 1970, the standard of living (real GNP per capita) rose 2 percent per year as productivity (real output per manhour) rose 2.5 percent per year. Part of the gain in productivity was taken in increased leisure as average annual hours per worker declined about one-half percent per year.

Passer pointed out that one difficulty facing the United States is the increasing emphasis on the production of services rather than goods. He cited figures that showed that 67 percent of the work force would be engaged in producing services by 1980 as opposed to 61 percent in 1970. This constitutes a problem because productivity is lower and productivity increases come much more slowly in the services industries. Despite this continuing shift in the labor force, the goods produced in 1980 are expected to constitute about the same percentage of total output as in 1970. Thus, because of rapid productivity increases in the goods-producing industries, the percentage of output in the form of goods is expected to remain unchanged even though the proportion of employees producing those

goods is expected to decline from 39 percent to 33 percent.

The U.S. annual increase in productivity in manufacturing in 1965-70 was only 1.9 percent compared to a range of 3.8 to 14.3 percent among six major industrialized nations, Passer said. With rates of compensation rising rapidly in the U.S. in this period, and productivity increasing slowly, unit labor costs climbed 4 percent a year—faster than any of the other six major countries.

Productivity increase

Productivity increased 3.5 percent in 1971 and gained at a rate of 6 percent in the second quarter of this year, Passer said, but this improvement was due primarily to the cyclical upswing in the economy. He said such large increases probably would not continue once the economy moved closer to the full employment level and started growing at a slower rate.

Despite the slower rates of increase in the late 1960s, Passer said, the United States still has the highest level of productivity in the world because of the abundance of capital, a highly educated and skilled labor force, and advanced technology. However, other nations are catching up, he said, mainly by increasing their capital investment and their development of technology.

Passer cited figures that showed a high correlation between the amount of capital stock (equipment, etc.) per worker and the level of productivity. He said that a large amount of capital seemed to be an essential ingredient in the recipe for high productivity, but he noted that a capable labor force and advanced technology also must be available to use the capital efficiently.

Reviewing the status of productivity measurement, Dr. Geoffrey Moore, Commissioner of Labor Statistics, said:

Statistical series are available on an annual and quarterly basis for the private economy, farm, non-farm, corporate and manufacturing sectors, and on an annual basis for 40 individual industries. Major gaps exist in data for construction, communications, trade, finance, insurance, medical and other services where the output is intangible and difficult to measure.

There is also need for an integrated set of data on output per man hour, unit labor costs, profits and prices, and measures of other factor inputs such as capital.

Moore suggested research topics based on statistical information should include a study of factors affecting productivity differences among plants and industries; studies of productivity costs, profits and prices in specific industries; and the experience of Productivity Centers in Europe.

NEW CHAIRMAN—*Secretary Peterson is shown presiding over a meeting of the National Commission on Productivity. It was the first meeting since the Commerce Secretary assumed the chairmanship of the commission.*

Assessing facts

Gary M. Cook, Acting Director of the Bureau of Domestic Commerce, discussed the Commerce Department's efforts to assess information on factors affecting the U.S. competitive position, such as investment, age of equipment, productivity, tax policy, technological trends, training, tariff and nontariff trade business and availability of information.

These factors would be assessed in relation to other countries and in relation to key industries. Cook said there is a need to assess not only the current position but also what the position is likely to be in five to 10 years.

Programs to stimulate technological changes and foster productivity, trade and social welfare, were described by Calvin Collier, Deputy Under Secretary of Commerce.

Collier told the Commission that since the Federal Government contributes 54 percent of all expenditures on research and develop-

The purpose of the National Commission on Productivity, established in 1970, is:

- *to promote productivity and work motivation;*
- *to promote effective use of management and labor personnel;*
- *to promote competitiveness of U.S. products in world markets; and*
- *to develop programs for workers adversely affected by automation.*

Its members, in addition to Chairman Peterson, are:

Business — Stephen D. Bechtel, Jr., president, Bechtel Corp.; Berkeley Burrell, president, National Business League; Edward W. Carter, chairman of board, Broadway-Hale Stores, Inc.; Archie K. Davis, president, U.S. Chamber of Commerce; M. Peter Venema, chairman of board of National Association of Manufacturers; R. Heath Larry, vice chairman of the board, United States Steel Corp.; Walter B. Wriston, chairman, First National Bank.

Labor—I. W. Abel, president, United Steelworkers of America; Frank E. Fitzsimmons, president, International Brotherhood of Teamsters; Leonard Woodcock, president, International Union, United Automobile Aerospace and Agricultural Implement Workers of America.

Public — Beverly Briley, Mayor of Nashville; William T. Coleman, Jr., of Dilworth, Paxson, Kalish, Levy and Coleman; John T. Dunlop, professor of political economy and dean of the faculty of Arts and Sciences, Harvard University; Howard W. Johnson, chairman, Corporation of the Massachusetts Institute of Technology; William Kuhfuss, president, American Farm Bureau; Edward H. Levi, president, University of Chicago; Arjay Miller, dean, graduate School of Business, Stanford University; Arch A. Moore, Governor of West Virginia; John Scott, master of National Grange; W. Allen Wallis, Chancellor, University of Rochester.

Government — Secretary of Labor James D. Hodgson, Secretary of Treasury George P. Shultz; Virginia Knauer, special assistant to the president for Consumer Affairs; Herbert Stein, chairman, Council of Economic Advisers.

ment there is interest in getting a greater return from the 20,000 government-owned patents.

Also, Collier said, the Commerce Department is seeking ways of assisting the individual inventor or small firm through tax and other incentives. To encourage the use of Government patents, Commerce is exploring more flexible and innovative arrangements for licensing Government patents other than the nonexclusive royalty free license now used.

Stimulating investment

Finally, Collier concluded the Federal government is seeking ways of stimulating nonfederal investment in research and development and improving the application of the results through more flexible federal contracting policies and joint industry-government partnership projects.

Dr. Leo Mayer of the Council of Economic Advisors, and Dr. Ken Farrell, Deputy Administrator of the Economic Research Service, U.S. Department of Agriculture, gave the Productivity Commission members a summary of progress in the study on productivity in the food industry.

Study praised

The Productivity Commission members commended a study of productivity measurement for the federal government, conducted by the Office of Management and Budget, the Genera' Accounting Office and the Civil Service Commission. And, members recommended that results of the study be communicated to state and local governments.

Tom Morris, Assistant Comptroller General, and Brian Usilana of OMB, said the study showed over 50 percent of the Federal sector covered by measurement systems and minimal use of the measures by top management and that employees covered showed a 2 percent improvement rate.

Findings resulting from the project to enhance government productivity were:

► Guidelines for evaluating agency work measurement systems issued to agencies.

► Civil Service Commission should provide special training in productivity analysis.

► Effectiveness measurements should be encouraged through assistance to agencies by the Office of Management and Budget.

► "Productivity Bank" concept for financing capital investments to fund fast payback projects should be considered.

Paper Industry Sees Specs Conversion Big Metric Cost Concern

Training Employees Will Also Be Major Cost Item But Part Of Industry Is Already Metric

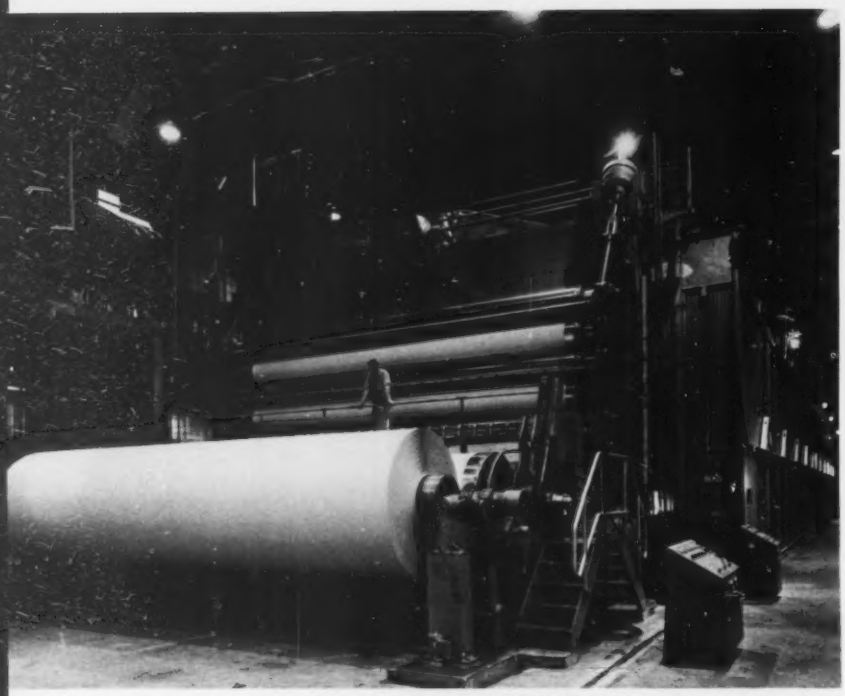
(This is the second article of a series Commerce Today *is publishing on the impact expected on various industries should the nation eventually convert its present measurement system to metric. The articles are excerpted from papers prepared for the recent University of California conference on the "Impact of Metric Changeover on Packaging and Allied Industries" at San Francisco. This article is based upon a paper prepared by Burt Kendall, industrial engineer of Crown Zellerbach Co., San Francisco.)*

The paper industry in the U.S. has always been involved in international trade; so for certain groups in the industry, the metric system of measurement is not new. This was confined primarily to language when communicating specifications and prices, identifying shipments and preparing shipping documents for export. The most common export metric dimensions are meters and/or millimeters, kilograms and grammage (grams/square meter). Generally, this has been just a slide rule or table conversion.

Also, a large percent of mill and converting equipment used in the industry is European. Thus, production and maintenance people are familiar with equipment built to metric specifications and the problems of maintenance.

If it is that simple, why the concern about costs, plans, etc? The main question is how far does industry go—part way as we are doing or all the way—which would mean producing metric paper made to metric specifications with metric manufacturing allowances from materials specified in metric terms and produced on equipment calibrated in metric units.

Basically, the paper industry is a chemical industry, so to technically trained people, the change will be a matter of *thinking* in metric terms rather than in the present common units.



COSTLY CONVERSION—*Converting specifications will be the largest and probably the costliest matter concerning the paper industry if the U.S. changes its measurement standards to metric. Specifications cover machinery such as this huge newsprint-making mill, operating methods, raw materials, products, packaging and customer requirements.*

This will be a major problem, however, getting people to THINK METRIC. Everyone is reluctant to make a change. Even top management—if they are not interested, little will be done.

The costly items will be training people and converting specifications. Training people is internal and will be handled by a training group. Converting specifications will be the largest and probably the costliest because of the quantity involved. There are specifications covering machinery, operating methods, raw materials, products, packaging and customer requirements. Coordination of this work with mills, converting plants, box plants, various other divisions, all the sales offices and customers in two countries, the U.S. and Canada, will be a tremendous task. Probably two-man teams knowledgeable in certain areas will work together checking each other, starting with more prominent or standard specifications first.

Preliminary to such changes, management must set a policy as to how far the changeover is to go and the timing. A coordinator should be chosen and given the authority to carry out the management policy throughout the corporation. This coordination should follow the industry trends which will probably be coordinated by one or more industry associations. These groups should standardize the metric symbols to be used throughout the industry.

The company training department will have to prepare training manuals of different types depending upon the job requirements. For example, the language change will require training for typists, stenographers and all who correspond or communicate. A South African publication, "Metrication for the Typist," is an example. This one is prepared in two languages! Another example is "Craftsmen's Pocket Book", an English publication for the construction industry. This handbook covers the basic units of metric measurement that bricklayers, carpenters, painters, plumbers and electricians will use.

Metrication of specifications will be tied into corporate and industry policy because fractions cannot be converted into *even* units. It is necessary to round off. This rounding off can accumulate—resulting in sizes being "off". Tolerances must be set and standardized for all plants. Some would have to be agreed upon industry-wide.

One time changes

Scales, instruments, measuring devices, testing equipment and packaging identification will have to be changed over—an "M Day" could be scheduled so all are changed at one time. Some customers and suppliers may not join in the schedule. This will lead to a "dual" system which should be avoided because of possible confusion. Scales on machinery may have to be ground down and engraved with metric scales.

One important way to keep costs for the change to a minimum would be to coincide metrication with other changes, particularly when machinery or equipment have to be modified and taken out of production.

Operating reports and statements would, of course, be changed to the metric system. To aid management in the transition, these reports could be stated in customary and metric for several months or until managers could *think* of new benchmarks.

The key to the success of converting to metric lies in thorough *planning* and *organization* of the process. A realistic plan and timetable must be provided. Actually, learning metric is simple—unlearning the common units will be difficult.

DOMESTIC BUSINESS REPORT

- **Veterans jubilant over new assistance bill**
- **GSA scores for minority business efforts**
- **Solid waste poses new industry challenge**
- **Textile industry grows to world's best**
- **President's Minority Business Council starts workshops**

New Act Paves Way For More Veteran Jobs

A cheer went up this month among returning servicemen, when the bill to increase benefits to veterans rights passed through Congress and was signed into law by President Nixon.

To the Vietnam veterans, and to all other eligible veterans of past United States conflicts, the amendments to the "GI Bill" passed by this session of Congress mean more chances at education and at apprenticeship or on-the-job training programs.

To employers, these new amendments mean savings in dollars when they hire veterans for job training programs, as well as the assurance that they are getting mature employees who will prove of value to their companies.

Basically, the Vietnam Era Veterans Assistance Act of 1972, featuring these amendments to veterans education laws, provides for the increase of rates of vocational rehabilitation, education assistance and special training allowances paid to eligible veterans and persons; provides for advance education assistance payments to certain veterans; makes improvements in the education assistance programs; opens more programs to widows or widowers and dependents of veterans; and even brings the female veteran on a completely equal level with her male counterparts.

Increased benefits

Of major interest to businessmen are the provisions of the bill which increase by as much as 48 percent benefits to eligible veterans in apprenticeship or on-the-job training programs.

The "GI Bill" itself has always had provisions for allowances paid by the Veterans Administration to veterans enrolled in state approved programs of training or apprenticeship. This provision has proved to be an incentive to the job seeker if he is an eligible veteran with post-Korean service. It has also been an incentive to an employer, who can hire this veteran, train him to the exact specifications of the business, and still *not pay* a journeyman's salary until the veteran is fully qualified.

Under the past program, the single veteran could receive $108 per month for the first six months, $81 per month for the second six months, $54 per month for the third six months, and $27 per month for the remaining period, with additional amounts being paid if the veteran has dependents.

Under the Assistance Act of 1972, the monthly training assistance allowance has been raised to $160 during the first six-month period, $120 during the second six-

FIRST HAND EXPERIENCE—*Thomas Barrus is one veteran getting first hand experience on a factory job, part of a massive on the job training program that is putting returning veterans back to work. The new amendment increases his benefits.*

month period, $80 during the third six-month period and $40 during the fourth and any succeeding six-month period, for the veteran with no dependent. Again additional amounts will be paid if the veteran has dependents.

Earn while learning

The employer pays the veteran a beginning wage of at least half of the target salary, to be increased periodically to reach at least 85 percent of the journeyman's wage by the last month of training. These wages, however, cannot be less than the wages paid other non-veterans in the same training position.

James F. Oates, Jr., national chairman, Jobs for Veterans, said the increased rates for apprenticeship and other on-the-job training programs will permit untold thousands of young Vietnam era veterans, who—for a variety of reasons—are unable or unwilling to return to classrooms to earn while they learn.

"Under this program," Oates declared, "participants are paid an educational allowance by the Veterans Administration and a training wage by an employer. Upon completion of training or attainment of journeyman status, the young veteran can take his rightfully earned place as a fully skilled participating member of the labor force and his community."

Any employer with job earnings which require at least six months training (not more than two years) or apprenticeship training (which may exceed two years) may wish to apply for state approval so that veterans can receive "GI Bill" benefits. Businessmen should contact their nearest VA or State Employment Service office to find the right state agency with approval authority, since this authority varies from state to state.

For approval, *apprenticeship* programs must meet the standards of apprenticeship published by the Secretary of Labor. Requirements for other *on-the-job* training programs vary from state to state, according to the standards set up by each state's approving agency.

Under the new Veterans Assistance Act of 1972, educational assistance allowances have also been increased. The monthly allowance is now $220 for full-time students, $165 for three-quarter time, $110 for half-time, and $177 for cooperative training. Payments vary with the number of dependents up to $298 for two dependents and $18 additional for each dependent above two.

Payment varies

In addition, under the new law, persons undergoing institutional vocational rehabilitation may receive $170 per month for full-time training, $128 for three-quarter time, $85 for half-time, or $148 for on-farm, apprentice or other training full-time. Again payment will vary with the number of dependents and $18 for each dependent in excess of two.

The bill authorizes advance payment of the rehabilitation subsistence allowance (under the vocational rehabilitation program) and the educational assistance allowances (except in the case of flight training or a program pursued by correspondence). This provision will give the eligible person an initial advance payment for the first month or partial month, plus an allowance for one full month of training. The advance will not be allowed for less than half-time training, however, and a certificate will be required of the trainee, a provision designed to prevent erroneous payment.

Of interest to the woman veteran is the provision that places her on a par with male veterans, by including a clause that states that for *all* VA purposes, a "wife shall include the husband of a female veteran and the term 'widow' shall include the widower of a female veteran." Under the old law, in each case it had to be shown that the husband or widower was incapable of self-maintenance and permanently incapable of self-

VETS AT WORK—*Job training and employment go hand in hand for these veterans who are working on a truck battery on one of a number of job training programs throughout the country. The amendments, just signed into law by President Nixon, increase the eligible veterans' educational allowances while on the job.*

support due to mental or physical disability.

Still another provision authorizes payment of an additional "work-study" allowance of $250, payable in advance, to veterans who agree to perform no less than 100 hours of services for the VA at its offices, during or between periods of enrollment in educational programs.

Other provisions of the bill authorize increased rates for farm cooperative training, war orphans, widows and wives educational assistance, and special training for the educationally disadvantaged.

The bill also strengthens the Veterans Employment Service within the Department of Labor to provide maximum employment, training and counseling opportunities for veterans, especially disabled veterans and veterans of the Vietnam era, through existing programs, coordination and merger of programs, and the implementation of new programs.

Note For Federal Contractors

Executive Order 11598, which became effective Sept. 24, 1971, requires Federal contractors and first-tier subcontractors to list job openings with the United States Employment Service.

The primary purpose of this Executive Order is to expand the job opportunities that the Employment Service can make available to Viet-Nam-era veterans.

Business firms that are affected by this directive can make a significant contribution to the Jobs for Veterans Program through voluntary support and implementation of the order's specifications.

Full details of the Executive Order can be obtained by contacting the nearest Employment Service or Regional Manpower Administration office.

Apprenticeship Or Other On-The-Job Training Allowances Under The Vietnam Era Veterans Assistance Act Of 1972

Periods of training	New Law			Previous Law		
	No dependents	One dependent	Two dependents [1]	No dependents	One dependent	Two or more dependents [1]
First 6 months	$160	$179	$196	*$108*	*$120*	*$133*
Second 6 months	120	139	156	*81*	*92*	*105*
Third 6 months	80	99	116	*54*	*66*	*79*
Fourth and any succeeding 6-month periods ...	40	59	76	*27*	*39*	*52*

[1] Present law makes no provision for payment of additional amounts for more than two dependents. H.R. 12828 provides payment of $8 for each dependent in excess of two.

New Goal Set By Federal Agency For Establishing More Concessions

The General Services Administration has set a goal of establishing 30 more minority-business concessions within Federal office buildings by the end of fiscal year 1973, according to the General Services Acting Administrator, Arthur F. Sampson.

To date, 88 minority business concessions have been established nationwide through this Federal agency's efforts, at a total value of more than $11 million. Eleven of these have started in business since July 1 of this year.

The minority-owned concession program began as an experiment in helping develop minority business enterprise throughout the country. It has developed since its pilot area exploration into an ongoing program that is expected to eventually open at least 208 of these minority firms—at least one in every Federal office building located in the various parts of the United States, cited the top GSA official.

GSA became involved in the program because of its close allegiance with the Commerce Office of Minority Business Enterprise, which coordinates minority business enterprise programs of the Federal Government.

The Commerce Department began looking into the possibility of moving into the area of minority concessions during the summer of 1970, and—using the Pentagon Concourse as a pilot area—opened two minority business concessions in that location in December 1970.

At the ceremonies marking the opening of these two minority business concessions (a card shop and a record shop), the Under Secretary of Commerce, James T. Lynn, in his capacity as chairman of the Inter Agency on Minority Business Enterprise, announced the establishment of the National Task Force on Minority Business Concessions, and named Sampson — then Commissioner of the Public Buildings Service—as its chairman.

Membership on this Task Force is comprised of high-level officials of Federal agencies which have real property management responsibilities. Anthony W. Innamorati, Assistant Commissioner for Buildings Management, serves as both GSA representative on the Task Force and as its vice chairman. Since Sampson's appointment as Acting Administrator of General Services, in recent months John F. Galuardi, Acting Commissioner, Public Buildings Services, has been named as the National Task Force Chairman.

Special agreement

To further facilitate this program, Sampson directed his staff to develop a special tripartite agreement to be used as the contract by all member agencies in the implementation of the program. This tripartite agreement clearly and simply sets forth the responsibilities of the three parties involved in the contract—the Federal agency, SBA and the concessionaire.

GSA—or any member agency—also provides assistance to the concessionaire before the contract is signed by surveying the building to determine market potential, by assisting the entrepreneur in preparing his business plan and proposal, and by forwarding all the necessary documents to SBA for certification and approval.

Only eight terminations and one transfer of the concessions set up to date have occurred—less than 10 percent of the 88 in existence. Compared with the 50 percent failure figure usually expected of new businesses over a two-year period, these figures indicate the success of the program.

Arthur F. Sampson
Acting Administrator
General Services Administration

Sampson said that one of the primary objectives of the program is to help the concessions stay in business and make a profit. GSA assists those in business with management and technical knowhow whenever it is needed.

It is estimated that approximately 20 of the presently established 88 concessions are still in business and making a profit today because of the GSA assistance and commitment in this area.

GSA is also highly involved with other programs designed to increase minority-owned business. The agency has begun an intensive program which has enabled more disadvantaged construction firms to more fully participate in the Federal construction program. During the period July 1, 1971 to Aug. 31, 1972, GSA has awarded 176 construction contracts to SBA, valued at more than $11 million.

In addition, since GSA operated most of the Federal buildings across the country, an effort was made to award more service contracts to minority firms. To date, 213 service contracts have been awarded, valued at $8.5 million. In the manufacturing contract area, for this 16 month period, the agency has awarded 60 contracts, valued at more than $9 million.

Industry Gears Up To Meet New Solid Waste Disposal Challenge

"We know that the pollutants which are removed from the air and water eventually must reach a burial ground. Only a few of them can be recycled. Many can cause a land pollution problem. And available dump space is fast disappearing near densely populated areas," said National Industrial Pollution Control Council chairman, Bert S. Cross.

The fact that industry must prepare to meet the challenge of solid waste disposal and accept the fact that air and water pollution will not be permitted is one of the conclusions reached by the NIPCC Industrial Solid Waste Advisory Committee, and is reported in the booklet *Industrial Solid Waste,* just released by the Council.

Taking a close look

The NIPCC Advisory Committee takes a close look at the problems of industrial manufacturing solid waste, and warns industry that it cannot bury its head in the sand and hope that its solid waste problems will go away. The report observes that environmental protection pressures can be expected to increase over the next decade, which will make it necessary for industry to solve its solid waste problem along with its air and water pollution problems.

According to the National Center for Resource Recovery, Inc., an estimated 4 billion tons of solid waste is produced annually in the United States. Of this, animal waste accounted for some 2 billion tons, mineral waste, more than 1 billion tons, agricultural waste, 650 million tons, commercial and other municipal waste, about 300 million tons, and industrial waste accounted for the smallest amount—130 million tons.

Nevertheless, industry has a commitment to rid the environment of its share of the "third polluter"—solid waste, and is ready to do its part.

"In general," states the NIPCC report, "the kinds and quantities of solid waste from manufacturing being generated and in prospect as a result of more restrictive air and water quality requirements can be accommodated through recycling, waste generation reduction programs and proper disposal systems."

But water and air pollution abatement systems are also building more quantities of solid waste, so, in order to achieve the objectives of re-using waste materials or reducing the amount of solid waste without excessive cost "or other burdens to industry or government, . . . more detailed information on the generation, processing, reuse and ultimate disposal of industrial wastes; better coordination of related environmental objectives; and equitable and uniform enforcement of regulations governing air, water and solid waste pollution control" is necessary.

Specifically, the NIPCC committee recommends the need for:

- Better information on sources of industrial solid waste, including identification of the sources and the quality and quantity of that waste, as well as changes in production of industrial manufacturing solid waste. (NIPCC would possibly form the framework for such an investigation).
- Better definitions of industrial solid waste problems, either as they

JUNK CARS—*One kind of solid waste that marks landscapes throughout the country is junk cars. This solid waste pile is waiting to be converted into useful metal.*

RECYCLING—*A pile of trash awaits processing at Ecology, Inc., plant in Brooklyn. In a system of recycling solid waste developed by Dr. Stephen Varro, 150 tons of city waste is reduced daily to 60 tons of organic compost fertilizer.*

now exist or are anticipated, together with a better estimation of the impact of pollution control legislation, in order to set priorities.

- A first priority to be given to the disposition of hazardous and toxic materials because of their double health-environmental implications.
- Better evaluation of regional processing and disposition of industrial solid waste, because of its potential advantages.
- Enactment and enforcement of solid waste codes that are on an equal basis both nationally and locally. Information on nonuniform enforcement of these codes should be brought to the attention of local, state and Federal agencies.
- More incentives to recycle waste materials for reuse or for stockpiling; such as, an equivalent of the depletion allowance provided in the tax structure for virgin materials.
- An investigation of the economic impact of water and air pollution controls on small organizations and marginal producers to provide a dependable and quantitative basis for decision-making on standards, variances and compliance assistance.
- Encouragement of collective pooling of research and development efforts where problems are industrywide and inherently beyond the financial capability of any one component of an industry.
- NIPCC encouragement of the Environmental Protection Agency to facilitate the dissemination of information on acceptable and economic solutions to industrial solid waste pollution problems.

Money costs in ridding the environment of industrial solid waste are expected to be high, and the technology is still not here to disposing of much of the waste.

The NIPCC report suggests that "industries and individual companies and plants are likely to find the most economically attractive solution to solid waste problems by undertaking thorough and imaginative analyses and by developing priority action plans to adjust present modes of operation to accommodate the changing and prospective conditions and requirements."

In any event, it concludes that "industry must prepare to meet these challenges" presented by all forms of environmental pollution.

On the solid waste problems, many industries across the country have already begun to find and put into operation their solutions.

For example, the Campbell Soup Company has already invested more than $1 million to solve its solid waste heaps. In its Sumter, S.C., plant, Cambell Soup is nearing completion of a by-products recovery system to recycle all solid wastes to a controlled closed cycle poultry feeding program, including waste treatment facilities for the residuals generated on this operation. In Chicago, Ill., the company is providing a solid waste incinerator, and in Napoleon, Ohio, installing a new solid waste disposal system.

American Cyanamid Company continues its commitment to be "a responsible citizen in the communities where its operations are conducted" by managing and cleaning up water, air and land with "reasonable and realistic standards." This commitment includes working on its solid waste problems in a variety of ways. For instance, in its Willow Island, W.Va., installation, American Cyanamid is now purchasing its raw materials in bulk, eliminating thousands of bags and their subsequent disposal problems.

Laboratory research

At Warners, N.J., the company has begun research with laboratory and pilot plant scale studies to develop a land-based waste treatment process for handling plant wastes now barged 112 miles out to sea, with approval of official regulatory agencies. In Andersonville, Ga., American Cyanamid has a program of land reclamation preserving the natural physical appearance of the area, using solid waste disposal as its landfill, and at the Evendale, Ohio plant, a facility is being constructed to burn production combustible solid wastes in the plant boilers, thereby reducing requirements for outside purchased fuels, as well as eliminating solid wastes.

In both the areas of litter control and solid waste management,

Brockway Glass Company, Brockway, Pa., has made advances. It is active both as an individual company and together with programs sponsored by the Glass Container Manufacturers Institute in tackling the problems. One case in point is a test project underway for the potential uses for salvaged glass containers. Brockway has, on an experimental basis, used 30 percent levels of reclaimed glass in the raw materials mix. It is continuing its efforts in this research to determine what long term effects high use of reclaimed bottles and jars will have on the production and use of glass containers, and what the practical limits are for recycling.

Kerr Glass Manufacturing Corporation, Los Angeles, Calif., is participating in glass bottle reclamation programs at each of its glass plants, collecting to date more than 70 million bottles or jars that would have otherwise gone into municipal waste disposal systems. All of these bottles have been recycled in either their glass furnaces or those of their competitors.

The largest generators of industrial solid waste are the lumber and paper industries. Alton Box Board Company, Alton, Ill., is helping reduce its waste products by reclaiming and recycling more than 300,000 tons of waste paper fiber annually. "This material," notes the company, "if not converted by us into new, useful paperboard products, would become part of the solid waste disposal problems.

In 1971, the combined paper stock operations of Container Corporation of America, Chicago, Ill., were involved in the collection of 994,000 tons of wastepaper for recycled. More than 700,000 tons of this wastepaper was recycled by Container Corporation's domestic mills in manufacturing 1,560,000 tons of paperboard. Recycled fiber, therefore, comprised 45 percent of the total fiber requirements of the corporation last year.

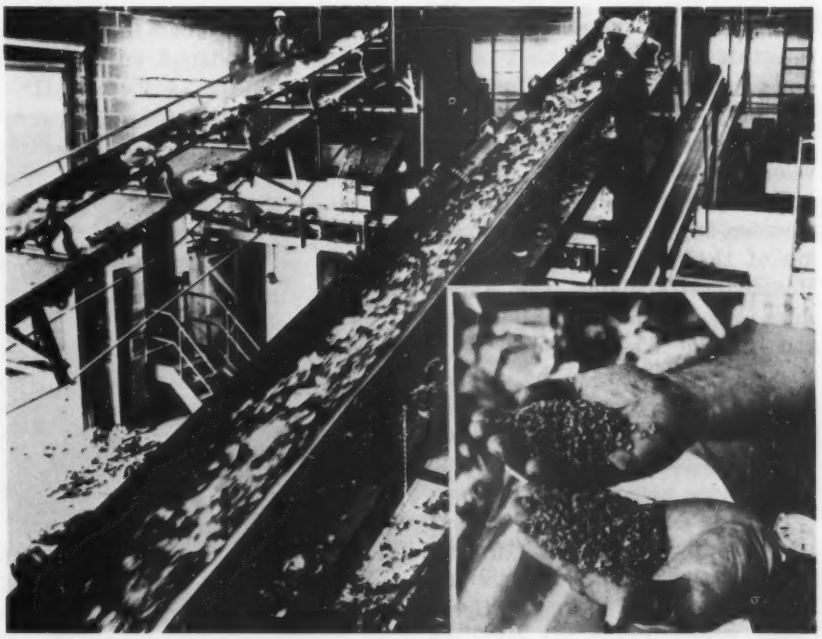
The corporation has already invested $5 million on recycling paperboard mills, and is contemplating a second $5 million Ultraformer paper machine for this program. The first machine in progress at its Philadelphia mill is in full operation. It has also completed modernization programs at the Los Angeles and Wabash, Ind., mills.

Pilot project begun

In addition, Container's Pioneer Division is cooperating with Chicago in a pilot project to determine the feasibility of municipal collection of old newspapers which are voluntarily segregated by householders. It has developed promotional materials to stimulate homeowners to segregate wastepaper, which Pioneer is purchasing from the city. If this test is successful, it will be extended.

Industry is not ignoring its solid waste problems which, as the NIPCC Advisory Committee points out, "could not only result in production interruptions, excessive costs, and even plant shutdowns, but also in lost business opportunities and lost potentials for improved product and production effectiveness."

WOOD CHIPS—*Piles of wood chips accumulate near a California lumber mill before process into useful material.*



ECOLOGY PLANT—*Ground up trash moves on conveyors to a further grinding and separation stage in a system of recycling waste at a plant in New York. Manufacturing solid waste problems are reviewed in a new industry report.*

New Regional Commission Ready To Focus On Pacific Northwest

A new economic development regional commission, which holds the promise of improvement in the quality of life and advancement in the economic position of three states is gearing up to go into action.

The commission is the Pacific Northwest Regional Commission and covers the statewide economic development of Washington, Oregon and Idaho.

A first for Northwest

It is the first such commission to be developed after an invitation was issued by Vice President Agnew for more states to create economic development regions.

And, according to Robert E. Ruddy, Special Assistant to the Secretary of Commerce for Regional Economic Coordination, it is the second to be established since the other regional economic development commissions were formed in 1966 as a result of the Public Works and Economic Development Act of 1965, and the third such commission to be planned on a full-state basis. It joins six others organized under Title V of that Act in a Federal-State effort to improve the overall economic development of the Nation.

The other two whole-state commissions are New England, consisting of the States of Connecticut, Massachusetts, Maine, New Hampshire, Rhode Island and Vermont, and the Old West Regional Commission (the first to be formed since 1966), consisting of the states of Montana, Nebraska, North Dakota, South Dakota and Wyoming.

The remaining Title V regions are Coastal Plains, consisting of parts of Georgia and North and South Carolina; Upper Great Lakes, consisting of the northern parts of Michigan, Minnesota and Wisconsin; and Four Corners, consisting of parts of Arizona, Colorado, New Mexico, Utah and Ozarks with portions of Arkansas, Kansas, Missouri and Oklahoma.

President Nixon appointed Jack O. Padrick, formerly Director of the Commerce Department Office of Business Services, as the first Federal Cochairman of the Pacific Northwest Regional Commission. Other members of the commission include the State Cochairman, Governor Tom McCall of Oregon, Governor Daniel J. Evans of Washington and Governor Cecil D. Andrus of Idaho.

Three states

The three states of Washington, Oregon and Idaho were designated as an economic development region in May of this year by Secretary of Commerce Peterson at the request of these three governors, who advised the Secretary that:

"This most recent expression of interest in joining together on the part of western states to attack common economic concerns follows Vice President Agnew's assurances that sympathetic consnideration will be accorded to regional economic planning bodies."

Jack O. Padrick
Federal Cochairman
Pacific Northwest Regional Commission

The Vice President issued an invitation to states this year to join existing regional commissions or to form new ones for planning purposes. He also invited existing Title V commission states to reorganize on a whole-state basis and also invited other states to join them or to form new commissions.

Revenue sharing

"This would allow them to begin planning now for the use of both general and special revenue sharing funds, as well as other grant programs, on a comprehensive statewide basis," Agnew said.

Governors McCall, Evans and Andrus pointed out that the forming of such a commission by their three states will reflect the longstanding recognition of the commonalty of interest of their three-state area in terms not only of economics, geography and history, but also in their shared belief of the necessity of intelligent planning for the future.

In stressing the importance of the new commission to the economic development of the country and to the intelligent use of revenue sharing funds, Secretary Peterson said that he anticipates the creation of both the region and its commission under the Federal-State partnership envisaged by the Public Works and Economic Development Act, is "but the first step in more effectively attacking the problems of development in the three states."

Padrick said that the establishment of the commission will further assist President Nixon's plan to decentralize the government. "What we are trying to do," Padrick said, "is to make the Federal system work the way it was envisioned by our forefathers."

Padrick pointed out that the rise in the centralization of the government has been astounding. During the past 36 years, Federal revenues

TIMBER RESERVES—*One of Alaska's most valuable resources are its timber reserves in the Southeastern and Gulf coastal areas. Alaska, although not a member of the Pacific Northwest Region, is one state that will benefit from its existence.*

have increased 90 times. At the same time, however, the administration of Federal programs and the use of Federal funds at the state and local level has not kept pace—resulting in several problems.. Padrick listed some of them as the overlapping of programs at the state and local levels, the distortion of state and local priorities, increased administrative costs, and program delay and uncertainty, as well as the creation of new and frequently competitive state and local governmental institutions.

Regional concept

Padrick said, "The regional commission concept, especially on a whole-state basis, is the first meaningful attempt to reverse this trend."

The Federal-State partnership that results from the regional commission setups is the only Federal program where state governors have a *vote* in what programs will be recommended and carried out in their areas. In fact, any recommendations are only considered if passed by a majority of the governors concerned and by an affirmative vote delivered by the Federal cochairman.

Padrick recalled that in the beginning of the Regional Commission program, the areas covered were the distressed areas of certain counties among certain states, following the Appalachian concept.

"However," he stressed, "long-term plans in developing economic success and quality of life know no boundaries. In fact, sometimes developing a county which is not distressed is the best way to bring economic advantages to the underprivileged county lying next to it."

The new Federal Cochairman also pointed out that many local level programs have to involve state agencies and setting up economic development regions on a whole-state basis solves this problem.

Long-range plans to be considered for improvement of life in Idaho, Oregon and Washington include ways to take care of the quality of state growth under the present and projected population of each state; decisions on building highways, not just for the sake of highways, but for scenic value; policies to be decided for handling the expected shift from a power surplus to a power deficit; methods for solving the softening in the labor market situation that hits all three states in winter months; measures to be taken to upgrade and improve job situations through technical or high-skilled training.

Indian assistance

In addition, Indians living in the Pacific Northwest Region need help. More than 13,000 are located in Oregon, 33,000 in Washington and 6,000 in Idaho.

Management and labor relations need improvement towards higher productivity results; international trade has the potential for growing; the historical disadvantage of high freight rate differentials from the Midwest to these states needs to be equalized.

Two other states will benefit from the new three-state alliance—Hawaii and Alaska. These states are the primary U.S. jumping off place to Alaska, and greater trade can be envisioned with Hawaii. These five states can be considered as working together for the economic advantage of the country.

Padrick said he expected the Pacific Northwest Regional Commission to go into action immediately. Federal headquarters are being established in Washington, D.C.; state headquarters in Spokane, Wash.

Ombudsman For Business

Businessmen who need assistance in their dealings with the Federal Government now have a central office in Washington, D.C., to write or call for information, suggestions, or even for registering complaints —the Commerce Department Ombudsman for Business.

All inquiries should be addressed to the Ombudsman, Thomas E. Drumm, Jr., Special Assistant to the Secretary, U.S. Department of Commerce, Washington, D.C. 20230, or call 202-967-3178.

Stanley Nehmer
Deputy Assistant Secretary
of Commerce for Resources

Eileen Gormley
Senior Institutional Analyst
Reynolds Securities, Inc.

Peter Scotese
President
Spring Mills, Inc.

More Than Two Million Workers, Billions In Investment, Make U.S. Textile Industry World's Best

"Few realize that textile and apparel production now employs approximately 2.3 million workers . . .

"Few realize that the textile industry, which prides itself on operating efficiency, has invested billions of dollars over the last decade to make itself the most modern and efficient in the world."

Stanley Nehmer, Deputy Assistant Secretary of Commerce, made these observations in an address on government and the textile industry at a special "Money in Fashion" seminar in New York.

Nehmer's was among four viewpoints expressed at the meeting of 100 leading executives in the textile industry. Others were by Eileen Gormley, Senior Institutional Analyst for Reynolds Securities, Inc.; Peter Scotese, President of Spring Mills, Inc.; and John Weitz, a fashion designer.

Reviewing the difficulty the Federal Trade Commission experienced in balancing the interests of consumers and manufacturers in establishing new care labeling laws Nehmer said ". . . industry, Government and the consumer can cooperate in ways that will serve the needs and desires of all Americans."

Commenting that flammability standards "should be effective," Nehmer said the standards should accomplish the aim of Congress in writing the legislation, that is, of protecting the consumer from the unreasonable risk of death or injury resulting from burning textiles and apparel.

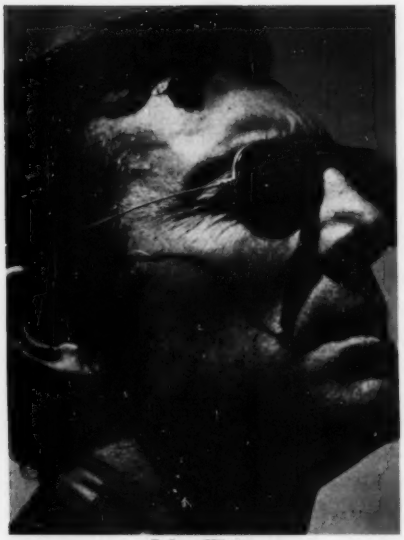
"This goal should be accomplished, keeping in mind the interests of the ultimate consumer . . ." he continued, "and, the government must also be sure that a flammability standard is reasonable and practicable. A standard which cannot be met, for example, will not result in clothes which will meet the standard—it would mean only that shortages of these clothes would develop."

In addition to strides made in establishing flammability standards for children's sleepwear, Nehmer predicted that standards soon will be forthcoming for blankets, sleepwear in the larger sizes, upholstered furniture, children's dresses, and curtains and draperies."

Nehmer reviewed costs associated with flammability standards as they exist today:

• **Textile raw materials** — To make a textile material nonflammable, one must either treat existing fiber or fabrics, or develop nonflammabile materials suitable for the end use for which they are intended. There has been significant progress in both approaches—witness the new "Modacrylics" for use in children's sleepwear. However, both approaches still entail problems. Thus, the availability and cost of satisfactory treatments and newly developed fibers can significantly alter the current balance of fibers and fabrics used in the regulated product.

• **Production procedures**—Some of the new raw materials which would be utilized to satisfy flammability standards might not be compatible with current production processes and procedures. In addition, new equipment is frequently necessary, such as machinery to treat fabrics with flame retardant finishes.



John Weitz
Designer

• **Testing and facilities**—Flammability testing is by nature destructive, which means that a certain quantity of the product must be defaced and discarded. Testing equipment, including conditioning chambers and laundry equipment, can be a significant cost. Fire regulations may require that flammability tests be conducted in separate rooms or even separate buildings. In addition, the presence of a flammability test facility may lead to an upward adjustment in insurance rates.

• **Record keeping**—Maintenance of adequate test records is required to verify test results. This could lead to a major modification of existing production control methods.

• **Potential legal ramifications**—Product liability suits appear to be increasing in the product areas regulated by flammability standards. Industry must consider the possibility that this activity could result in increased costs for legal services.

Detailing the cost areas, Nehmer told the executives not to overlook the fact that tremendous cooperation between the government and industry was involved in securing the present legislation, that this cooperation has continued in the development of existing standards, and that continued cooperation is essential to give further protection to the consumer at the same time minimizing the economic impact on the textile and apparel industry.

Discussing the import situation, Nehmer pointed to the results of bilateral agreements concluded with Japan, Korea, Hong Kong, and Taiwan.

"These agreements have had the immediate effect of lowering substantially the recent dramatically high growth rates of man made textile fiber imports," he said.

Nehmer said import of man made fiber textiles from the four Asian countries for the first seven months of this year are expected to decline by about 12 percent from the corresponding period in 1971.

"The United States," he added, "still looks to the negotiation of an international all-fiber textile agreement as the ultimate solution of the problems experienced by the textile and apparel industry worldwide."

Miss Gormley reviewed Wall Street's reservations about textile stocks. Among concerns she raised were:

- The industry's image of outmoded manufacturing techniques.
- The cyclical nature of the industry.
- The accelerating uptrend in imports.
- The shortage of skilled workers, and the high cost of labor and attempts at unionization.
- Emerging government regulations for environmental and noise pollution and flammability standards.
- The inability of the industry to offset higher operating costs.

However, Miss Gormley said, "an important transition now is underway in the industry."

Scotese told the executives that "fashion can make money for you if you approach it knowledgeably. Fashion can cost you money if you do otherwise."

In spite of the textile industry's ability to "put high fashion in a $4 bedsheet," something is wrong, he asserted.

"The end is maximizing return on investment," Scotese said. "Our industry's return is low, and people who count know it."

The consumer, Weitz said, "has been exposed to a vast number of choices . . . has become a pretty sophisticated fellow.

"And so it is no longer possible," Weitz continued, "to mass-blanket the consumer with one look."

A way to "beat the rap," Weitz concluded, is to provide options.

"Give the consumer many style trends at many price levels retailed with many different approaches.

"Tomorrow's specialist will specialize only in change," he stressed, concluding, "tomorrow's image will be that of timeliness and thereby of timelessness."

—Bureau of Domestic Commerce

FASHION—*Fashion and apparel are important part of the textile industry which is rapidly changing to keep pace with technology and foreign competition.*

Promise Of Year Of Action Comes From Minority Business Council

The President's Council on Minority Business Enterprise is embarking on new activities and a series of workshops designed to assist in the development of minority-owned business ventures nationwide, it was announced at the first meeting of that council to be held outside the Nation's capital.

The council met in Los Angeles, Calif., Oct. 19 for formal swearing in ceremonies of new and reappointed members and to initiate the first of a series of committee workshops created to help solve major problems faced by members of minority groups opening their own businesses.

Secretary Peterson conducted the ceremonies in which the new and reappointed members were sworn in for two-year terms on the council which was formed by President Nixon in March of 1969. On Oct. 6, the President announced the appointment of 59 persons to the council, 22 of whom were reappointed.

In his announcement the President designated W. W. Keeler, chairman and chief executive officer of Phillips Petroleum Co., Bartlesville, Okla., to serve as chairman of the council, and Berkeley G. Burrell, president of the National Business League, Washington, D.C., to continue to serve as vice chairman.

Also attending the meeting was Robert Stuart, chairman of National Can Corp., Chicago, who was named by Secretary Peterson last April to serve as chairman of the National Purchasing Council which seeks to increase corporate purchases from minority firms.

Keeler said that among new activities planned by the council is the forming of five committees in addition to the executive committee to work in the areas of capital and financing, business opportunities, education, training, and purchasing and procurement for minority businessmen. In its new structure the council will work closely with Secretary Peterson and the Commerce Department's Office of Minority Business Enterprise, of which John L. Jenkins is director.

Specific actions

Secretary Peterson said he is looking forward to the council's new activity and to its recommendations for specific actions in areas determined to be most acute.

New members are:

Edward B. Bivens, director, urban affairs, Hallmark Cards, Inc.; Joseph Black, vice president, special markets, The Greyhound Corp.; Richard A. Bland, president, Bland Realty Co. and Pacific Coast Bank; Thomas E. Boyle, president, International Chemical Workers Union; Donald G. Brown, section chief, division of equal employment opportunity, Western Electric Corp.

James L. Buckner, D.D.S., president, Chicago Financial Development Corp.; Donald Calc, assistant director, American Indian Career Center; Daniel T. Carroll, executive vice president, Gould, Inc.; Frank C. Casillas, vice president, business development and planning, Bunker Ramo Corp.; George P. K. Ching, director, corporate planning and development, Swift & Co.; Willie D. Davis, president, Willie Davis Distributing Co.

Dr. Richard T. Delgado, optometrist and owner, Texas State Optical; Pedro deMesones, director, Community Development and Management Service of New York; Walter W. Durham, president, MESBIC Financial Corp. of Dallas; Richard Fricke, senior consultant, Lawrence-Leiter & Co.; Julian Garcia, president, New Mexico Auto Dealers Association; Richard C. Gerstenberg, chairman of the board, General Motors Corp.

Howard L. Haynes, secretary-treasurer, International Brotherhood of Teamsters of Louisville, Ky.; Benjamin Ichinose, president, Benjamin Ichinose Dental Corp.; Frank E. Judy, president, Agricultural Chemicals, Inc.; Robert J. Keyes, assistant to Gov. Ronald Reagan for community relations; Natalie S. Lang, director, urban affairs program, Booz, Allen and Hamilton.

Stephen K. Louie, real estate broker; Bobby Brown Lyle, acting dean and assistant professor, School of Business Administration, Southern Methodist University; Charles F. McAfee, architect and owner, Charles McAfee Architects and Planners; Catherine L. Montgomery, commissioner, Fair Employment Practices, State of California.

John R. Montgomery III, president, Lakeside Bank; Henry C. Pedro, sales representative, Arthur McGee, Inc.; Hilary J. Sandoval, Jr., president, Sandoval News Services, Inc.; The Most Rev. Bishop William M. Smith, presiding Bishop, African Methodist Episcopal Zion Church, Eighth Episcopal District; Milton J. White, principal, Jesse Mae Jones Elementary School of Atlanta; Dr. Charles Wilson, vice chancellor for academic programs, UCLA; Nancy Wilson, Palos Verdes, Calif., businesswoman; James E. Woodson, president, Topeka Corrugated Container Corp., Inc.; Harding Young, president, Southeastern Economic Development Foundation and professor of management, Georgia State University.

Reappointed members are:

Darwin W. Bolden, national executive director, Interracial Council for Business Opportunity; Lester A. Burcham, chairman of the board, F. W. Woolworth Co.; Council Vice Chairman Berkeley G. Burrell, president, National Business League; Robert O. Dehlendorf, member of board, Arcata National Corp.; W. P. Gullander, president, Nat'l. Assn. of Manufacturers.

Dr. David B. Hertz, director, McKinsey & Co., Inc.; Francis T. Hurley, Auxiliary Bishop of Juneau; Paul A. Johnston, president, Glen Alden Corp.; Chairman W. W. Keeler, chairman of board, Phillips Petroleum Co.; Robert P. Keim, president, The Advertising Council, Inc.; Joe W. Kirven, president ABCO Building Maintenance Co.; John L. Lawler, administrative vice president, American Institute of Certified Public Accountants.

The Right Rev. Bishop Arthur Marshall, Jr., presiding bishop, African Methodist Episcopal Zion Church, Ninth Episcopal District; Albert C. Meyer, retired senior vice president, Bank of America of Ashland, Ore.; Clinton Morrison, chairman of the trust committee and director, First National Bank of Minneapolis; Lawrence S. Phillips, president, Phillips-Van Heusen Corp.

Edward B. Rust, president, State Farm Insurance Co.; the Rev. Dr. Leon H. Sullivan, pastor, Zion Baptist Church of Philadelphia; Mitchell Sviridoff, vice president, division of national affairs, The Ford Foundation; Associate Judge William S. Thompson, Superior Court of the District of Columbia; Kendrick R. Wilson, Jr., chairman of board, AVCO Corp.; Arthur M. Wood, president, Sears, Roebuck & Co.

Retained members on the council are:

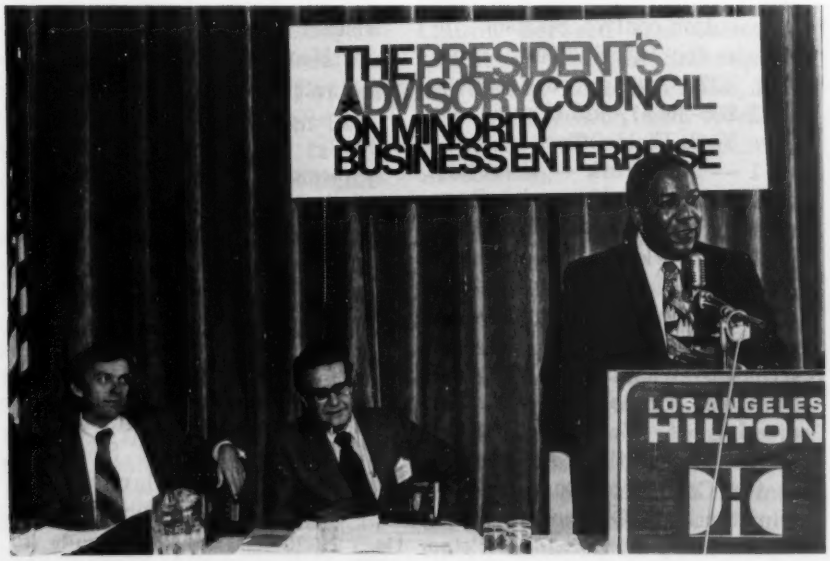
Desi Arnaz, president, Desi Arnaz Productions; John A. Barr, dean, Graduate School of Management, Northwestern University; Vidal Cantu Jr., executive vice president, City Service Furniture Corp. of Laredo, Tex.; John Cardenas, secretary-treasurer, Louie's Specialties Work, Inc.; Manuel Casino, Jr., administrator, Economic Development Administration in San Juan, Puerto Rico.

Benjamin Fernandez, consulting economist, Fernandez & Associates; Bayard H. Friedman, executive vice president, Ft. Worth National Bank; Jose Carlos Gomez, president and publisher, El Informador; Richard W. Gonzales, manager, industrial relations department, Assembly Division, Ford Motor Co.; Garland C. Guice, executive director, the Chicago Economic Development Corporation.

Brady Keys Jr., president, All Pro Enterprises, Inc.; Jewel Stradford Lafontant, partner in law firm of Stradford, Lafontant, Fisher and Cousins; David A. Lester, executive director, Urban Indian Development Association; Thomas A. Pappas, president, C. Pappas & Co., Inc.

Dr. Everett R. Rhoades, associate professor of medicine, University of Oklahoma Medical School; Rodman C. Rockefeller, president, International Basic Economy Corp.; Juan Rodriquez de Jesus, consultant to the Government of Puerto Rico; George Sandoval, president, Sandoval Distributing Co.; John G. Scontsas, vice president, Colonial Trust Co.

Jesse Terry, president, Terry Manufacturing Co.; Otis Thorpe, president, Thorpe & Associates, Inc.; Richard B. Tullis, president, Harris-Intertype Corp.; Hector I. Vazquez, executive director, National Puerto Rican Forum, Inc.; Frank Veiga, president, National Economic Development Association; Robert Weingarten, president, Macro Publishing Co., Inc.



GOING INTO ACTION—*The President's Council on Minority Business Enterprise met in California this month for swearing in ceremonies of new and reappointed members, conducted by Secretary Peterson. New actions and a series of workshops were instituted at the same time. Pictured at the meeting (from left) are Sam E. Wyly, outgoing chairman of the Council, W. W. Keeler, new chairman, and Berkley G. Burrell, who continues as vice chairman. The Council helps develop minority business. At right, the luggage system of American Airlines at La Guardia Airport was designed by a minority firm.*

New Profit Margin Regulations Set On Mergers, Spin-Offs

The Price Commission has issued new regulations governing restatement of base period profit margins by companies which make changes in their businesses by mergers, spin-offs, acquisitions or divestitures.

The Commission said it would require companies which merge with others on a pooling of interests basis or which spin-off a portion of their assets to stockholders to restate their profit margins in report to the Commission.

Restatement of profits

In addition, the Commission announced a regulation under which a company that is involved in or is considering an acquisition or divesture may apply for a restatement of its base period profit margin to reflect the change.

A special 10-day processing procedure is being established to process requests for exceptions based on proposed acquisitions or divestures of legal entities which would result in a change of at least 10 percent of a company's base period profit margin, the Commission said. Other requests will be given normal processing, which at this time is currently completed in 30 to 45 days.

The regulations were adopted in accord with a provision of the Economic Stabilization Act which requires that stabilization standards ". . . provide for the making of such general exceptions and variations as are necessary to foster orderly economic growth and to prevent gross inequities or hardships."

C. Jackson Grayson Jr., commission chairman, said the new regulations will provide equitable treatment for all methods of acquisition and divesture by business concerns.

The Commission regulations, in accordance with generally accepted accounting principles, require restatement of information reported to the Commission by firms involved in acquisitions accounted for by pooling of interests or divestures accomplished by spin-offs.

Establishing procedures

"The Commission recognizes however," Grayson said, "that for sound business reasons a large number of acquisitions and divestitures are not accomplished by these methods." Its new regulations, therefore, establish procedures and requirements by which a firm may seek a restatement of profit margin through the Office of Exceptions and Review.

A company which seeks a restatement of its profit margin by exception must restate all acquisitions and divestures of any nature made after the last day preceding its first base period year.

The Commission's new regulations also require detailed financial data of each transaction which must be reconciled with previous financial statements submitted to the Commission.

The new regulation applies to the purchase or sale of a business entity "which is customarily regarded as being separate for cost, pricing, and profit decisions; and may be distinguished from other units of that firm because of separate or different management or profit responsibilities, industries, methods of doing business, or other logical and customary distinctions."

Companies which seek an exception must be able to show that the acquisition has brought about the control of such an entity or in the case of a divesture, has resulted in loss of control.

Calendar For Businessmen

Nov. 1—New York—Input-Output Conference at Roosevelt Hotel from 9 a.m. to 4 p.m. Topics include Input-Output Analysis of Post Viet-Nam economy, U.S. superport developments and costs of pollution control. Sponsor: Institute for Interindustry Data, Inc., 1270 Avenue of Americas (212-265-2666), and Commerce's New York Field Office.

Nov. 1 — New York — Secretary Peterson will address luncheon meeting of Insurance Federation of New York, Inc., Americana Hotel. For further information, Eldon Wallingford, executive secretary (212-732-6570).

Nov. 9-11—Washington, D. C.—Southern Economic Asociation meeting at Washington-Hilton Hotel. Registration: Association at the College of Business Administration, Oklahoma State University, Stillwater, Okla. 74074.

Nov. 16 — Chicago — Institute of Gas Technology Symposium. Howard F. Casey, Deputy Assistant Secretary of Commerce for Maritime Affairs, will be main speaker.

Nov. 16—New York—American Institute of Marine Underwriters dinner. Robert J. Blackwell, Assistant Secretary of Commerce for Maritime Affairs, speaker.

Nov. 16-17—New York—80th annual meeting of the Society of Naval Architects and Marine Engineers.

Dec. 5—Columbia, S. C.—Industrial Developers Association. For information, Charlotte Fielder, State Development Board. Phone: 803-758-3145.

Dec. 6—Washington, D. C.—Shipbuilders Council, Board of Directors luncheon. Robert J. Blackwell, Assistant Secretary of Commerce for Maritime Affairs, will be main speaker.

Dec. 28-30 — Toronto, Canada — American Economic Association. For information, Rendigs Sels, 1313 21st Ave., Nashville. Phone: 615-332-2595.

SCIENCE & TECHNOLOGY REPORT

- **New tuna fishing methods sought to save porpoise**
- **Scientists conducting undersea probe of pollutants**
- **Fisheries group gets new members**
- **Patents of special interest**

Liquefied Gas Study Aims To Save Dollars

In the quiet of the laboratory, scientists are engaged in work which is of basic importance to the transportation over long distances of liquefied natural gas, and consequently is of primary interest to businessmen and all others concerned with the growing problem of adequate energy resources.

Scientists of the Cryogenics Division of Commerce's National Bureau of Standards at Boulder, Colorado, have begun a three-year study on how to measure reliably the density of liquefied natural gas. The study will develop basic information required to improve measurements of liquefied gas during its transfer from seller to buyer.

Ten energy producers from across the Nation are supplying funds to make the study, which is being conducted by Dr. Michael Hiza and Dr. William Haynes of the Cryogenics Division.

The energy producers are: Columbia Gas System Service Corporation; El Paso Natural Gas Company; Marathon Oil Company; Natural Gas Pipeline Company; Phillips Petroleum Company; Shell International Gas Limited; Tennessee Gas Pipeline Company; Texas Eastern Transmission Company; Transcontinental Gas Pipe Line Corporation; and the Chicago Bridge and Iron Company.

Martin Cines, of Phillips Petroleum, is chairman of the research grant committee, which is composed of company representatives. Liaison between this committee and the Bureau of Standards is provided by Louis A. Sarkes, Manager of Research and Advanced Technology of the American Gas Association.

Rising demand

Major importance is attached to the study, and to associated research work, because of the rising demand for liquefied natural gas as a supplement to energy resources.

Reservoirs of natural gas often are found in remote regions of the world, such as Alaska, North Africa, and the Mideast. To move the gas from these areas to the energy markets, the gas usually is liquefied near its source and transported by tanker. The liquefaction process reduces the temperature to about 260 degrees below zero Fahrenheit and the volume about 630 times. This makes world-wide commerce in liquefied gas economically feasible.

A problem, however, has developed, because a fraction of the extremely cold, liquefied gas evaporates during shipment. Natural gas is a mixture of methane, nitrogen, ethane, propane and butane. Since the components evaporate at different rates, the buyer and seller find it difficult to determine the density of the liquefied natural gas at the time of delivery. The density, of course, determines the quantity of the gas actually delivered.

Some measurement techniques and calculations are used to determine density. However, inaccuracies can occur which may result in a loss of money either to the buyer or the seller. Density is clearly related to the economic cost of the gas. With rapidly increasing use of liquid gas, the losses could reach considerable sums.

So far as the U.S. is concerned, the pattern of commerce in liquid gas is changing rapidly. Up until March 31, 1972, the U.S. had ex-

ported a total of 110 billion cubic feet of natural gas packaged in liquid form, and had imported a mere five billion cubic feet. These measurements represent the gas converted from the liquid to the gaseous state. Such quantities are extremely small compared to the need for natural gas.

Varying projections have been made as to how much liquid natural gas the U.S. will import in coming years. The range in these projections is so great as to make any estimate uncertain. However, one set of projections made by the Federal Power Commission forecasts imports of 300 billion cubic feet by 1975 and four trillion cubic feet by 1990.

Only a fraction

Even these large figures constitute only a fraction of the natural gas demands of American industry. In 1971, more than 22 trillion cubic feet of natural gas was used in the field from domestic sources, and the rate of use is increasing at a rate of six or seven percent a year.

Meanwhile, the nation's proved reserves of natural gas are estimated at 278 trillion cubic feet, or about 12 years' supply at the present rate of use. Included in this total are Alaskan reserves of more than 31 trillion cubic feet. Industry sources report that in the last four years the discovery of new proved reserves in the U.S. has been only about half the rate of use, which for the last five years likewise has been true of proved oil reserves.

The method used by the Bureau of Standards' scientists to determine the density of liquefied natural gas is a modern adaption of the buoyancy principle of Archimedes, ancient Greek mathematician, physicist, and inventor, who discovered that a body immersed in a fluid is buoyed up by a force equal to the weight of the displaced fluid. According to the story, the principle came to Archimedes while lying in a bath, and he ran home undressed shouting "Eureka! Eureka!" meaning "I have found it." Using the principle, Archimedes found that a crown made for Hieron II, King of Syracuse, contained alloys of baser metals and was not pure gold.

The Bureau of Standards adaptation of the principle is essentially a three-coil system designed by Dr. J. W. Beams of the University of Virginia. Dr. Haynes, one of the scientists conducting the study on liquefied gas did his doctoral dissertation at the university on adapting the method for low temperatures and high pressures under the direction of Dr. John W. Stewart. The Bureau of Standards work involves the rapid and convenient determination of the density of the liquid gas by measuring by means of a magnetic field the buoyant force on a sinker of known volume suspended in the fluid. A measure is made of the magnetic force necessary to balance the gravitational and buoyancy forces. This provides a measurement of changes in density of the liquid gas.

Measurements are to be made of the densities of the pure components of the saturated liquid, of various mixtures of the components, and of several samples of typical liquefied natural gas composition. In addition, methods will be tested for calculating the properties of multi-component mixtures from the data. Methane is to be used as a base for studying the density of other components and mixtures.

Improving metrology

The results of these studies will provide basic information for improving the metrology, or density measurement standard, for liquefied natural gas. In consequence, techniques thus far used may be tested for error and correction made. The metrology problem is the purpose of another study being conducted at Boulder under the direction of Dr. Douglas B. Mann, Chief of the Metrology Section of the Cryogenics Division.

The first phase of the three-year study, now under way, involves research and the designing and construction of special apparatus with which to make the study. A corollary study now being made involves a description of the thermo-physical properties of methane, a work wholly sponsored by the American Gas Association. In this work Dr. Robert D. Goodwin and Dr. Benjamin A. Younglove of the Cryogenics Division are the primary investigators. The expectation is that the total study program on methane probably will be completed by the spring of 1973.

—National Bureau of Standards

New Documentary On FLARE Now Available On Free Loan

A new film entitled "FLARE" (Florida Aquanaut Research Expedition) produced for Commerce's National Oceanic and Atmospheric Administration is now available for distribution on a free loan basis. The film is a 14-minute, color 16mm documentary filmed almost entirely underwater.

The picture shows how teams of scientists, using a mobile habitat remained underwater for about five days each to study the coral reef environment off the Florida coast near Miami. Each team had a specific scientific objective. The missions included studies of the health, geology, and the plants and animals of the reef. An artificial reef made up of 600 rubber auto tires was also studied.

Distribution will be made through NOAA's 200 motion picture depositories. Requests to borrow the film, applications for long-term loan and print purchase, as well as a catalog of about 30 other motion pictures which NOAA distributes may be obtained by writing: Chief, Motion Picture Service, National Oceanic and Atmospheric Administration, 12231 Wilkins Ave., Rockville, Md., 20852.

—NOAA

New Tuna Fishing Methods Sought In An Effort To Save Porpoise

To save porpoises from accidental death in the nets of the U.S. tuna fishermen, Secretary of Commerce Peter G. Peterson has launched a program which is expected to provide new methods of fishing for the important tuna industry.

"When one porpoise dies in a tuna net, that is one death too many," Secretary Peterson said. "Enactment of the Marine Mammals Protection Act places in the Department of Commerce's keeping the protection of this magnificent mammal as well as other important species whose preservation I regard as absolutely essential.

"With President Nixon's support," he added, "we have launched a research effort that should give us fresh insights both into porpoise behavior and into new methods of tuna fishing. Immediate action will include encouraging all tuna fishermen to use the latest methods and equipment, including a fine mesh panel in nets."

Intensive effort

Secretary Peterson released the report of a Commerce committee headed by Dr. Dayton L. Alverson, Director of the National Marine Fisheries Service's Northwest Fisheries Center, which recommends an intensive effort to save the marine mammals.

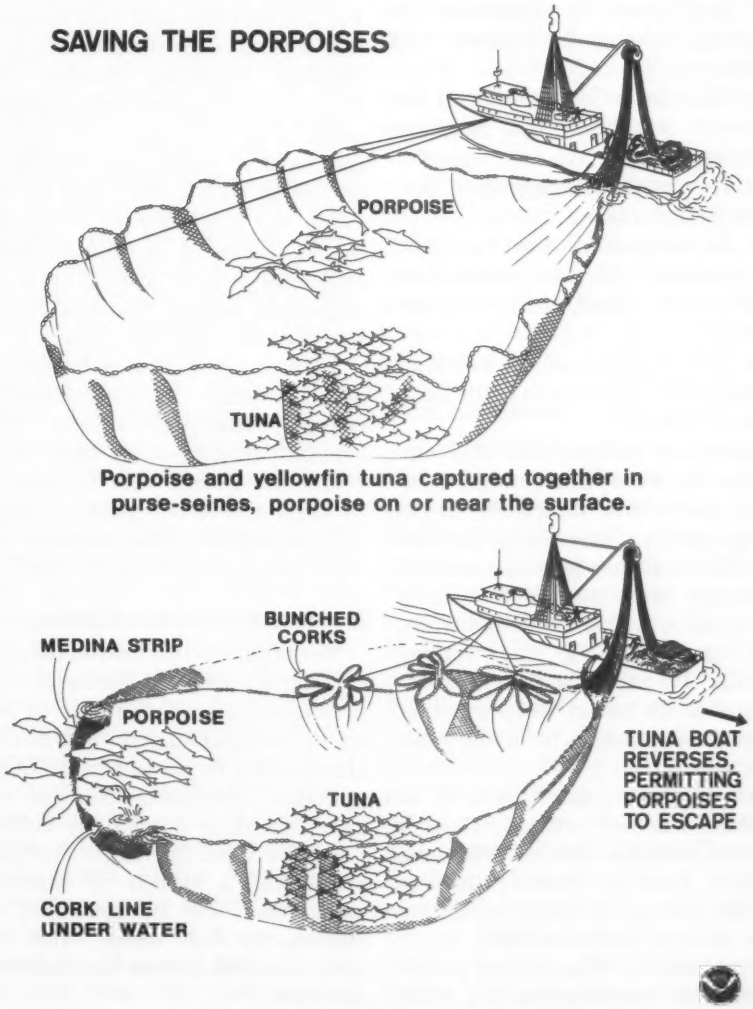
About half of the nation's yellowfin tuna catch is taken by seeking out schools of porpoise, which travel in tight association with tuna. Schools are encircled with the large purse seines, and, as the nets are drawn together, porpoises on or near the surface can become entangled in the nets and drown.

The committee, Secretary Peterson said, found that approximately 315,000 porpoises died in tuna nets in 1970 and 205,000 in 1971. It is, however, impossible to conclude from these figures whether the porpoise population is or is not being seriously affected by the tuna fisheries, he said.

He pointed out that whether or not the accidental kill materially affects the overall population, the Commerce Department is committed to the conviction that it must be brought as close and as quickly as possible to zero.

Many techniques for saving porpoise have been tried. In 1970 Harold Medina, a tunaboat captain, devised a panel to be incorporated in tuna seines, using smaller-mesh webbing which makes it more difficult for porpoises to become entangled. Medina nets are in use on more than 50 boats and all new nets incorporate a Medina panel.

Secretary Peterson endorsed the committee's proposal that NOAA should immediately undertake efforts to substantially reduce losses and, simultaneously, launch research programs in gear develop-



PORPOISE IN A TUNA NFT—*When porpoise are accidentally caught in the nets of tuna fishermen, they drown. An estimated 205,000 were lost in 1971. A new Commerce program hopes to find new methods of fishing for tuna that will allow any porpoise caught in the net to escape as shown in this drawing. A Medina Panel can be used in the back end of the large tuna nets which is lowered to allow the porpoise to escape. The deeper swimming tuna remain in the net.*

ment and biological studies to help attain the first objective.

Any solutions, he said, must be capable of practical use by the fishing fleet, which probably would be forced to fish under foreign flags if subjected to overly-restrictive regulation.

The Secretary endorsed the committee's recommendations that:

- All tuna seiners be encouraged to use the Medina panel;
- A cooperative Federal-industry program be launched to teach tuna fishermen to use more efficiently "backing-down" techniques allowing porpoises to escape over nets;
- A program be undertaken to improve fishing techniques and gear;
- Information be acquired on the behavior of tuna and porpoise schools in nets;
- Population assessments of porpoise be undertaken;
- An intensified effort be made to establish biological parameters vital to the impact of kill to population;
- Investigations of the behavior of porpoises and tuna to artificially-induced stimuli.

Secretary Peterson said the committee believes short-range solutions can best be attained by modifying existing techniques perhaps by using a deeper Medina panel, by changing backing-down tactics, by developing a dual purseline seine, and by developing net "sorting panels." He noted the recommendation that an aerial assessment of porpoise population be undertaken this year.

An advisory committee is to be appointed to work with the Department's National Marine Fisheries Service, from the ranks of leaders in the fishing industry, conservation groups and scientists.

The nation's tuna fishery is one of its most important with a retail value of $600 to $700 million annually. The fleet, valued at $400 million, has some of the world's most advanced fishing vessels.

—Office of the Secretary

Scientists Conducting Nine-Month Undersea Probe Of Pollutants' Effects On Marine Environment

Underwater investigations off Grand Bahama Island are presently under way under the aegis of Commerce's National Oceanic and Atmospheric Administration aimed at predicting environmental health through critical measurements of coral reef chemistry and biology. The program will take nine months.

Teams of scientists representing five universities and two research institutions, supported by NOAA's Manned Undersea Science and Technology program, will spend periods of up to seven days each in the habitat Hydro-Lab sitting in 50 feet of water. They will be carrying out a variety of coral reef studies designed to provide better understanding of these fragile but important oceanic features and of the life that inhabits them.

Because the reef populations react markedly to environmental change, scientists believe that eventual prediction of their environmental health will be possible through studies of photosynthesis and respiration rates related to the total energy reaching the reef.

Environmental monitoring

To obtain environmental data for correlation with the biological and oceanographic studies, an underwater environmental monitoring system will be housed in NOAA's undersea instrument chamber and kept operating during the Hydro-Lab investigations. Light, temperature, and a variety of chemical parameters will be measured by sensors in the water, and the data recorded within the undersea chamber.

Hydro-Lab is 16 feet long and eight feet in diameter, and can house up to four persons for a week. It is supported on a nonprofit basis by the Perry Foundation, Inc., and the Bahamas Undersea Research Foundation. Sited at a sand and coral bottom, it is adjacent to the outer coral reef and about 800 feet inshore of a steep drop-off into the deep Tongue of the Ocean, thus affording a variety of close-by undersea environments for scientific study.

Scientific teams supported by NOAA's MUS&T office have used Hydro-Lab for investigations since December 1971, and NOAA's contract for continuing use of the habitat through the end of the current series of dives amounts to $130,000.

NOAA-supported research projects to be carried out during the current series of Hydro-Lab investigations are as follows:

Dr. John Bunt, chairman, Division of Functional Biology, Rosenstiel School of Marine and Atmospheric Science, University of Miami, will study the ecosystem of the ocean bottom in the reef area. The long-range objective of his study is to provide better understanding of the dynamics and organization of the ecosystem, together with developing procedures to aid in seabed resource surveys and monitoring systems. Dr. Bunt and his team have worked on this continuing research project from surface ships as well as from the Tektite II habitat and from Hydro-Lab. Their work is also supported by the National Science Foundation, Atomic Energy Commission, National Aeronautics and Space Administration, and the Perry Foundation.

Richard Curry, also of the Rosenstiel School, will study certain chemical elements that are strongly affected by biological activity or rapidly changing physical conditions on the reef. This is a continuation of a program that began during Tektite II and continued during NOAA's Florida Aquanaut

Research Expedition project earlier this year.

Dr. William Schroeder of the Center for Marine Resources, Texas A&M University, will investigate the role of zooplankton (microscopic animal life) in the coral reef ecosystem. Dr. Schroeder and his team wish to obtain a full understanding of the role of zooplankton, the base of the marine food chain, to help pave the way for realizing the full potential of the marine fisheries resources available in the area. Baseline surveys of these natural communities will also contribute to understanding of the effects of man upon the oceans. Earlier studies in this project have been carried out with the support of MUS&T, Sea Grant, and the National Science Foundation, both from Hydro-Lab as part of the FLARE project.

Acoustical behavior

Dr. Thomas J. Bright of the Department of Oceanography, Texas A&M University, will carry out studies of the acoustical behavior of reef fishes. Divers who have just "listened" while swimming near coral reefs agree that they are very noisy places. This is in part a reflection of the great amount of biological activity in the reef—clicks and crackles attributed to shrimp, staccato sounds of squirrel fishes, and occasional noises from large creatures such as the spiny lobster or Nassau grouper when disturbed. Little is known of the nature and significance of sound production in marine invertebrates. Dr. Wright has studied behavior and sound of reef fishes for two years, using Tektite II and Hydro-Lab for previous investigations.

Dr. C. Lavett Smith of the American Museum of Natural History will continue his study of the community structure and space-sharing mechanisms of coral reef fishes, emphasizing in particular the competition for courtship and nesting space. He and co-principal investigator Dr. James C. Tyler began their studies during Tektite II, linking fish populations to such space-sharing characteristics as range size, shelter sites, and activity cycles. They believe that reproductive requirements may be limiting factors in some communities, and will pursue this idea in their current series of studies. They will also attempt to answer such related questions as whether use of an area for spawning precludes use of the same space by other species for feeding, and whether more than one species use a spawning area at the same time.

William P. Muellenhoff of Oregon State University will carry out a project supported by the Environmental Protection Agency investigating the degradation and exchange characteristics of digested domestic wastes now being dumped into marine waters. The divers will determine the exchange rates of sludge organic matter and nutrients with the seawater and bottom sediments, and assess the local short-term environmental response to the presence of the digested sludge samples.

Alan A. Allen of Marine Consultants, Inc., Long Beach, Calif., will lead a team seeking information on what happens to oil pollutants in the underwater marine environment. Most studies of this nature have focused on surface oil slicks. Carefully controlled oil pollution experiments will examine the interactions of petroleum hydrocarbon with the subsurface marine environment and develop plausible investigative procedures for later research on the effects of oil on bottom and near-bottom organisms. They will also make baseline studies of the hydrocarbon contamination levels in the waters and sediments near the habitat.

Ariel A. Roth of Loma Linda University, Loma Linda, Calif., will look into the reef-building process, determining how fast the local coral species are producing calcium carbonate—how fast the reef is building. He will compare rates at a depth of 60 feet.

Fisheries Group Gains Members

Seven appointments have been made by Commerce Secretary Peter G. Peterson to the Department's blue ribbon Marine Fisheries Advisory Committee.

The committee, selected to achieve both balanced geographical representation and a broad representation of the U.S. commercial fishing industry, marine sport fishing, the academic community, conservation interests, and the consumer, advises the Secretary on programs carried out by the National Marine Fisheries Service and its parent organization, the National Oceanic and Atmospheric Administration.

Chosen for recognized competence and proven interest in the marine fishery resources of the U.S., members are appointed by the Secretary for a term of one year, and are eligible for additional terms for purposes of continuity.

New members

New members are:

Dr. James A. Timmerman, Jr., Charleston, S.C., director of the South Carolina Marine Resources Division; Clifford V. Varin, West Sayville, N.Y., president of the Fire Island Sea Clam Co.; Richard H. Stroud, Springfield, Va., executive vice president of the Sport Fishing Institute, and vice president of the Sport Fishery Research Foundation; Willard F. Rockwell, Jr., Boston, Mass., chairman and chief executive officer of North American Rockwell Corp.; Charles R. Carry, Redondo Beach, Calif., executive director of the Tuna Research Foundation; Theodore T. Bogas, Astoria, Ore., director of public and government relations for Bumble Bee Seafoods; and Howard W. Nickerson, New Bedford, Mass., executive director of the Seafood Dealers Assn., of New Bedford. *—Office of the Secretary*

Patents Of Special Interest

Recent patents issued by the U.S. Patent Office included:

Gas scrubber. A gas scrubber comprising a housing having an inlet for contaminated gas adjacent the lower end and an outlet for cleansed gas adjacent the upper end. A filter bed extends across the housing between the inlet and the outlet and the filter bed includes a supporting grid structure and a number of separate, movable filter elements stacked several layers deep on the grid. Adjustable support means is provided for tilting the grid structure in the housing relating to the horizontal and control means is included for automatically adjusting the support means to change the angle of tilt, effecting lateral displacement of the filter elements around the filter bed to provide self-cleaning of the elements. Patent No. 3,683,593 issued to Roger E. Kent, Mount Prospect, Ill., assigned to National Dust Collector Corporation of Skokie.

Air pollution control device. Air polluting smoke particles are substantially removed from the upflow of smoke through a vertical series of housing sections into which water under pressure is injected closely below impeller blade assemblies. The blade assemblies are driven by a fluid motor through which the pressurized water is conducted to produce turbulence and mixing of the smoke with the water. The heavier water and smoke particles are flung radially outwardly to form a slurry which is baffled and collected from downwardly converging walls of the housing sections. Patent No. 3,963,326 issued to Clifford T. Deane, South Charleston, W. Va. and assigned to Vortex Air Corporation.

Apparatus for harvesting plants rooted in the ground. The apparatus includes means for severing the body of earth contiguous to the roots of the plants from the surrounding ground; and means for relatively removing the plants from the body of root-contiguous earth, including lifting the plants in relation to the ground, and agitating the body of root-contiguous earth when it is severed from the ground, to loosen the earth and reduce its cohesion with respect to the roots, before the plants are lifted in relation to the ground. Damage to the stems is minimized through the use of a special elastomer-faced belt lift mechanism as part of the lift means; and a rapid harvesting rate is maintained through the use of a special apparatus and technique for collecting and discharging the plants from the lift mechanism in a containerized condition. Patent No. 3,393,-721 issued to Eugene W. Arnold and Earl D. Hasenwinkle, Longview, Wash., and assigned to Weyerhaeuser Co., Tacoma, Wash.

Automotive suspension mechanism. A rear suspension mechanism of motor vehicles having a pair of trailing arms and a pair of axle drive shafts with inner and outer universal joints, each of the trailing arms being made up of inner and outer leaves connected with each other through a connecting member connected to the wheel hub and the axle drive shaft being of the type that no positively sliding mechanism is involved. The suspension mechanism permits the driving wheels to assume proper camber and steer angles and to move in the fore-and-aft direction of the vehicle. Patent No. 3,693,746 issued to Akira Yamamoto, No. 1024 Shimanagatami-cho, Minami-ku, Yokohama, Japan.

Abstracts and drawing of patents are issued in the *Patent Official Gazette* each Tuesday. More than 1,600 patents are issued each week. Trademarks are published in the *Trademark Official Gazette.* Copies of the *Patent Official Gazette* and the *Trademark Official Gazette* may be obtained from the Superintendent of Documents, Government Printing Office, Washington, D.C. 20402. A microfilm Patent Subscription Service is available from the National Technical Information Service, Springfield, Va., 22151.

Science Calendar

Nov. 9-11—Sioux Falls, S.D.—South Dakota Inventors Congress. Information: South Dakota Inventors Congress, State Office Bldg., Pierre, S.D., 57501.

Nov. 15—San Mateo, Calif.—Royal Coach Motor Hotel, 1770 S. Bayshore Blvd. Seminar on "How To Cash In On Inventions and New Products." Sponsored by Commerce Department, California Chamber of Commerce, Small Business Administration and California Dept. of Commerce.

March 14-16, 1973—Chicago, Ill.—Conrad Hilton Hotel. Industrial Water & Pollution Conference and Exposition. Sponsored by Water and Wastewater Equipment Manufacturers Assn.

March 19-21, 1973—Gaithersburg, Md.—National Bureau of Standards. National Roofing Technology Conference.

April 9-10, 1973 — Gaithersburg, Md.—National Bureau of Standards. Federal Information Re-Sources Conference.

March 23-25, 1973—Hill City, Kan.—Mid-America New Ideas Fair, Graham County Fair Grounds. Information: Hill City Chamber of Commerce, Hill City, Kan.

April 4-7, 1973—San Mateo, Calif.—Northern California Industrial Exposition, Hall of Inventions. Information: Northern California Industrial Exposition, Freeman and Associates, 77 Jack London Square, Oakland, Calif.

INTERNATIONAL COMMERCE REPORT

- Telecommunications mission in USSR, Poland
- Second U.S. showcase in Japan
- Current economic trends in Canada
- Calendar for U.S. foreign traders
- Opportunities in foreign construction projects

World Markets: U.S. Share Losses Spread

Imports from all sources by this country's leading trading partners expanded substantially during the latest 12-month period for which data are available, generally June or July, when measured in U.S. dollars. The increases become smaller, however, and, in some cases, are erased when measured in national monetary units, which mostly appreciated relative to the U.S. dollar under the currency realignment of last December. These differences are especially noticeable for those countries such as Japan and Germany whose currencies appreciated most.

Only Canada and France, among the top ten traders, posted sharp gains in total imports when measured in national currencies; most of the others expanded purchases in the range of 5 to 10 percent. Japanese imports, in yen, actually declined. By the dollar yardstick, however, the majority of the nations listed in the World Market Report table on pages 38 and 39 increased their intake of foreign goods by more than 10 percent.

Similar effects from the currency realignment were noted in the value of purchases of U.S. goods by this country's leading trading partners. Dollar-valued imports of U.S. products declined in more than three fifths of the listed markets. In national currencies, these losses were even larger and more frequent. Only Canada, among the top ten, substantially increased its intake from American suppliers. This overall lackluster performance produced widespread reductions in U.S. shares. More than four fifths of the 46 leading markets showed such a deterioration.

Although economic conditions in most of the large industrial countries have improved since the first of the year, with few exceptions they have not been accompanied by any strong pick-up in demand for U.S. products. France and Canada have continued their expansion, and Germany, the United Kingdom, and Japan have begun to recover from their 1971 slumps. Italy has also shown some signs of recovery. Although levels of industrial production in most of these countries are now rising, investment generally remains sluggish and unemployment and inflation rates continue at relatively high levels.

Canadian imports jump

Canadian imports from the United States expanded by more than one fifth during the latest available 12-month period. Nevertheless, purchases from other suppliers, similarly spurred by the buoyant economy, have risen even more rapidly, resulting in a slight

loss in this country's position. Higher arrivals of cars, as well as automotive parts and engines for assembly, led the advance in imports from the United States. At the same time, the inflow of American off-road tractors, office machines, especially computer parts, telecommunications equipment, and construction and mining equipment also contributed.

France and the Netherlands were the only other nations among the ten largest traders to raise the value of their purchases from this country. In both, however, the advances were of only modest proportions. Moderate increases in French imports of U.S. aircraft and office machines were largely offset by lower purchases of coal, nonferrous metals, and iron and steel, holding the gain to only four percent. In the Netherlands, largely as a result of smaller purchases of U.S. corn, imports from this country rose by only one percent. On the plus side, the intake of American soybeans grew rapidly, as did organic chemicals and aircraft.

The United Kingdom recorded a notable rise in its total imports, led by goods not traditionally supplied by the United States such as automobiles, diamonds, and petroleum. Arrivals of U.S. products, on the other hand, declined marginally during the latest 12-month period due to lower deliveries of nonelectric machinery, office machines, wheat, and tobacco. Stepped-up purchases of coal and aircraft engines helped minimize the loss.

The decline in Italy's imports of U.S. goods stemmed in part from a reduction of nearly one third in purchases of aircraft, although copper, various cereal grains, metalworking machinery, pulp for papermaking, and coal also fell. Conversely, arrivals from this country of raw cotton, nonelectric machinery parts, and soybeans posted moderate advances.

Over the past year, the slowdown in the Japanese economy has been reflected in sharply reduced rates of import expansion which have continued despite the recent economic upturn. Imports from the United States have been particularly sluggish, especially coal, corn, cereals, and office machines as well as various other types of both electric and nonelectric machinery. Only in toys and games and aircraft have Japanese purchases from this country risen significantly.

German purchases in U.S. drop

While German imports from other suppliers have advanced strongly, those from this country fell by nearly one tenth. Decreased purchases of U.S. defense goods were responsible for more than half the decline but those of nonferrous metals, especially copper, and grains also contributed importantly to the weak performance. Partially offsetting these losses were modest rises in the intake of chemicals, engines, and optical and precision instruments.

Among several of the smaller developed nations, U.S. exporters had more success. Stepped-up purchases of U.S. aircraft boosted Portugal's and Austria's inflow by 57 percent and 25 percent, respectively, and at the same time enhanced this country's share in those markets. The U.S. standing improved in Greece as well and edged up slightly in Denmark. In Spain, however, purchases from

World Market

The 46 markets shown below accounted for 89 percent of 1971 imports

Values in millions of dollars — Published

Country	1971 Imports			1972 Imports January through latest month				Import change in latest available 12-month period*		Reserves at end of second quarter	
	From world	From U.S.	U.S. share %	Latest month	From world	From U.S.	U.S. share %	From world %	From U.S. %	1971	1972
Germany, Fed. Rep.	34,341	3,544	10.3	July	22,848	1,956	8.6	+ 17	— 9	17,167	22,630
United Kingdom	23,973	2,648	11.0	Aug.	17,968	1,877	10.4	+ 14	— [1]	5,319	8,873
France	21,247	1,800	8.5	July	15,300	1,252	8.2	+ 21	+ 4	5,655	9,398
Japan	19,721	4,985	25.3	July	12,721	3,293	25.9	+ 6	— 7	7,801	15,844
Canada	16,822	11,804	70.2	Aug.	13,182	9,074	68.8	+ 23	+ 21	4,852	6,218
Italy	15,968	1,435	9.0	June	9,219	838	9.1	+ 11	— 4	6,092	6,431
Netherlands	15,522	1,463	9.4	June	8,665	673	7.8	+ 16	+ 1	3,498	4,388
Belgium-Luxembourg	12,866	821	6.4	June	7,594	407	5.4	+ 19	— 13	3,196	3,844
Switzerland	7,221	514	7.1	July	4,766	335	7.0	+ 15	— 7	5,083	7,018
Sweden	7,083	566	8.0	July	4,525	342	7.6	+ 9	— 8	965	1,394
Australia	5,256	1,161	22.1	June	2,523	564	22.3	+ 1	— 13	2,554	4,578
Spain	4,965	772	15.5	June	3,202	529	16.5	+ 20	+ 6	2,358	4,104
Denmark	4,545	380	8.4	July	2,727	205	7.5	+ 3	+ 4	424	792
South Africa, Rep.	4,432	723	16.3	Apr.	1,348	222	16.5	+ 2	+ 1	854	1,069
Austria	4,192	156	3.7	July	2,830	92	3.2	+ 20	+ 25	1,879	2,486
Norway	4,082	244	6.0	July	2,408	144	6.0	+ 5	— 6	962	1,289
Hong Kong	3,388	423	12.5	July	2,167	260	12.0	+ 11	+ [1]	[2]	[2]
Yugoslavia	3,317	201	6.1	May	1,165	72	6.2	— 6	— 17	180	467
Singapore	2,828	360	12.7	May	1,330	191	14.4	+ 13	+ 22	320	[3]627
Finland	2,795	126	4.5	June	1,523	69	4.5	+ 13	— 10	527	805
India	2,409	562	23.3	June	1,212	[2]	[2]	[4] + 13	[4] — 10	1,126	1,253
Mexico	2,407	1,479	61.4	Apr.	865	520	60.1	— 1	— 6	878	[5]1,136
Korea, Rep.	2,394	678	28.3	July	1,364	369	27.1	— [1]	— 16	581	611

Note: The countries shown above include the 46 major importers of U.S. merchandise in 1971 for which current data are available. In order to present comparable statistics for all countries, import data have been adjusted from an f.o.b. to a c.i.f. valuation for Australia, Canada, Panama, Philippines, Republic of South Africa, and Venezuela. Reserves include official holdings of gold and foreign exchange, the gold tranche position, and Special Drawing Rights in the International Monetary Fund.

Report

Bureau of International Commerce

into all free-world markets and 90 percent of imports from the U.S.

quarterly

Country	1971 Imports			1972 Imports January through latest month				Import change in latest available 12-month period*		Reserves at end of second quarter	
	From world	From U.S.	U.S. share %	Latest month	From world	From U.S.	U.S. share %	From world %	From U.S. %	1971	1972
Venezuela	2,151	952	44.2	.....	.....	.....	.....	+ 12	+ 1	1,202	1,505
Greece	2,098	139	6.6	Apr.	633	47	7.5	+ 24	+ 46	331	736
Iran	1,871	242	13.0	Mar.	638	110	17.2	+ 23	+ 35	313	825
Argentina	1,869	414	22.2	Mar.	448	89	19.9	+ 7	— 7	522	242
Taiwan	1,844	408	22.1	Mar.	532	113	21.2	+ 30	+ 26	564	606
Ireland	1,834	158	8.6	June	1,044	77	7.4	+ 10	— 19	803	1,039
Portugal	1,823	126	6.9	June	966	114	11.8	+ 29	+ 57	1,548	2,003
Israel	1,808	430	23.8	June	914	185	20.2	+ 11	— 2	538	1,080
Nigeria	1,510	212	14.0	June	794	[2]	[2]	[4] + 43	[4] + 38	344	327
New Zealand	1,346	137	10.2	Aug.	995	[2]	[2]	[4] + 8	[4] — 17	261	559
Philippines	1,316	328	24.9	June	666	172	25.8	+ 12	— 3	299	463
Thailand	1,287	183	14.2	Mar.	353	52	14.9	+ 2	— 9	934	1,066
Algeria	1,221	102	8.3	.....	.....	.....	.....	— 3	— 13	452	442
Indonesia	1,174	177	15.1	Mar.	273	39	14.3	+ 13	— 10	[3]	[3]
Malaysia[6]	1,112	68	6.1	May	522	33	6.4	+ 6	— 22	835	920
Turkey	1,088	129	11.8	June	689	63	9.1	+ 21	— 7	443	860
Pakistan[7]	926	212	22.9	June	309	64	20.8	— 31	— 63	215	284
Peru	753	220	29.3	June	390	114	29.4	+ 15	+ 6	261	287
Morocco	698	99	14.2	May	313	32	10.3	— 1	— 13	180	262
Trinidad & Tobago	657	115	17.5	June	396	72	18.1	+ 28	+ 32	54	85
Panama	389	137	35.2	Mar.	39	[2]	[2]	[4] + 9	[4] — 3	419	[5]476
Costa Rica	350	114	32.7	Feb.	56	18	32.4	+ 8	— [1]	14	37
Ecuador	304	104	34.1	Apr.	86	[2]	[2]	[4] + 23	[4] + 28	65	93

* Compared with preceding 12-month period.
[1] Less than 0.5 percent. [2] Not available. [3] End of February. [4] Import change in year 1971. [5] End of May. [6] Import data are for West Malaysia only. [7] Data are for West Pakistan only beginning December 1971. [8] End of December 1971.
Source: Official trade statistics of listed countries.

other suppliers rose more rapidly than those from this country despite higher valued arrivals of U.S. aircraft, corn, and soybeans.

In Mexico, this country's largest market among the developing nations, imports continued to be sluggish due to reduced public sector purchases, and the U.S. position declined. Reduced Mexican purchases of U.S. nonelectric machinery, corn, aircraft, soybeans, and iron and steel scrap contributed substantially to the decline. Meanwhile, a larger intake of U.S. electric machinery, especially parts for local assembly operations, and unassembled passenger cars helped temper the loss.

The U.S. share was enhanced in Singapore, as the inflow of electronic parts and components, mostly for assembly operations, expanded significantly. Nigeria increased its purchases from the United States by 38 percent and Taiwan by 26 percent, but in both the U.S. market position deteriorated moderately. Nonelectric machinery and aircraft were mainly responsible for boosting Nigeria's import total from this country. Radio and television parts for local assembly did the same for Taiwan. In Trinidad and Tobago and Ecuador, imports from the United States also rose sharply, improving this country's standing.

Reserves near $120 billion

Official reserves of the 46 leading U.S. trading partners shown in the accompanying table stood at nearly $120 billion as of June 30, 1972, more than two fifths above their level a year earlier. Although developed countries accrued more than nine tenths of the increase, the advance was virtually universal; only three nations, all developing, reported losses and two of these were minor. As it has been for the past several quarters, the persisting deficit in the U.S. balance of payments was the major source of the gain as other countries continued to accumulate large amounts of dollars which have been inconvertible since the New Economic Policy announced on Aug. 15, 1971.

The periods of monetary unrest that both preceded and followed the realignment of currencies in December 1971, especially the latter, gave rise to the adoption of capital and exchange controls by several major countries aimed at protecting themselves against the destabilizing effects of large-scale short-term capital movements. Some of these countries eased their controls earlier this year but reinstated or reinforced them after the floating of the pound sterling in June.

Japan more than doubled its reserves to $16 billion, largely due to a singularly strong trade surplus. The preponderant part of the increase occurred during the last six months of 1971, especially in July-September. In the June quarter of this year, Japanese holdings fell by nearly $1 billion after reaching a peak level of $16.7 billion in March. The outflow of capital, encouraged by government measures, and the shift of some foreign exchange out of official reserves to private banks were responsible for the second quarter decline.

German official holdings, meanwhile, rose to a record $22.6 billion, a gain of $5.5 billion. As with Japan, a favorable merchandise balance was the prime factor in the advance, although the German

current account failed to provide a surplus during the 12-month period ending in June. Unlike Japan, Germany amassed over three fourths of its gain since realignment last December, mostly during the second quarter of this year. A record inflow of foreign funds (prior to tightening of controls) largely accounted for the sharp rise in April-June.

Pound sterling floats

French reserves rose sharply to more than $9 billion, a gain of $3.7 billion. Capital inflows (despite controls) were largely responsible, although a trade surplus for the second half of 1971 helped. U.K. holdings climbed almost as much as the French despite the problems of the pound sterling near the end of the period. During the first five months of this year the British trade position deteriorated and the current account surplus, largely based on invisibles, shrank. A flight from the pound followed a dock strike in mid-June. After being supported briefly, the pound (by consensus, overvalued in the December realignment) was permitted to float a week later.

A rising trade surplus and heavy capital inflows pushed Australian holdings to nearly $4.6 billion, an increase of almost 80 percent. Among less industrialized countries, Spain added $1.7 billion to its reserves as earnings from invisibles, with tourism receipts particularly important, more than offset the trade gap.

Argentina was the heaviest loser of reserves among this country's important trade partners. The servicing of the nation's large external debt constituted a drain on holdings which the paucity of foreign investment did little to relieve. On the trade side, a rise in beef exports offset the loss in cereal shipments and promised a future merchandise balance and, possibly, even a surplus. Nigeria and Ghana also lost reserves but in only nominal amounts.

FROM WEST TO EAST—*After arriving in Moscow, U.S. telecommunications mission was received by Deputy Minister of Foreign Trade N. D. Komarov (second from right) and other Soviet officials. David Evans (standing) of the U.S. Embassy is shown distributing to these officials information about mission members' firms.*

Telecommunications Firms Get Soviet, Polish Leads

Thirteen senior executives representing some of America's leading telecommunications firms last month participated in a landmark trade mission to the USSR and Poland — the first Commerce-organized mission specializing in electronic communications equipment.

Mission Director John Sodolski, vice president of the Electronic Industries Association, termed the effort "immensely successful." This view was shared by Associate Director Richard J. Smith, of the Commerce Department's Bureau of International Commerce.

In both the USSR and Poland, interest was expressed in a wide range of U.S. products including telephone exchanges and other telephone equipment; satellite earth stations; data comunications equipment; radio and television broadcast transmitters; color TV cameras; microwave equipment; test instrumentation for communications systems; and fascimile equipment.

U.S. export control regulations remain a factor that must be considered in evaluating sales prospects in these markets. Although many products in this field require validated export licenses for shipment to the communist countries, many of those items are of a kind that may be granted such licenses for civilian applications.

Expect to go back

Soviet and Polish officials welcomed the mission's initiative and urged U.S. firms to join in the competition with other countries in the Western World to supply their import needs in this field. The mission members said that they intend to submit specific proposals as a result of their visit, and some of them have already made arrangements to return to the USSR and Poland to follow up on sales opportunities.

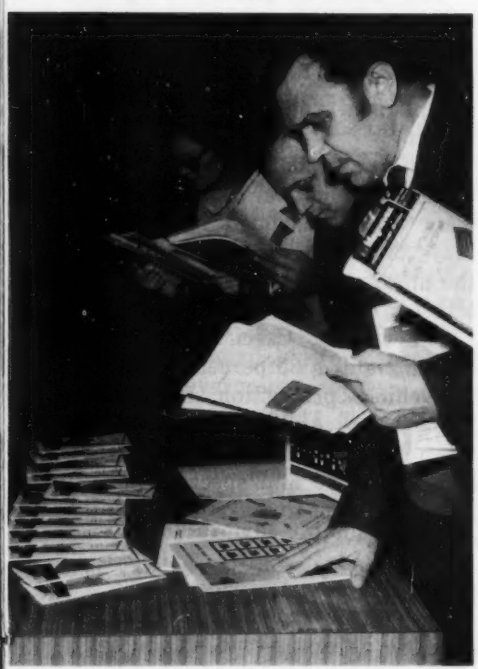
"The mission was timely and had the right cross section of manufacturers and products" was the way Lawrence J. Cervon, vice president

and general manager of the Gates Radio Co., Quincy, Ill., accounted for the mission's success. "Leads were obtained for a potential of $4 to $5 million in projects already approved in Poland," he noted, adding that the group developed some leads on specific requirements in the USSR and acquainted Soviet decision-makers with a number of U.S. companies for the first time.

All but two of the firms on the mission were new to these markets and were taking their first hard look at sales prospects there. The members were sufficiently encouraged by what they found to estimate a multi-million sales volume within the next year in Poland and the USSR. One substantial sale, amounting to $250,000 was reported virtually completed in Poland.

Mission Director Sodolski, who represented the interests of the members of his association, felt that the 'tone' of the mission was perhaps even more important than the 'leads' obtained. "We were a professional group dealing with professional counterparts, which led to understanding and progress," he said. "New knowledge of the Soviet and Polish communications systems and the people who manage them will enable our member companies to prepare proposals for close-in business, as well as to develop longer range contacts. We were able to gather more firm information in one week in each country than many companies, operating on their own, have gotten in years of effort."

FROM EAST TO WEST—*Polish trade official (left), at reception in Warsaw, explains details of doing business in his country as mission members Glen Robinson (center) and Jack Schrey listen intently. Unitra is a Polish trading organization responsible for purchasing telecommunications equipment.*



PERUSING BROCHURES—*Members of audience at mission's Warsaw presentation, which was attended by some 75 telecommunications engineers and specialists from Ministries and buying agencies, review company and product literature.*

The mission was cordially received by Deputy Ministers and other high-level officials of the appropriate Ministries and buying organizations in the USSR and Poland. Significantly, doors were also opened for meetings with technical specialists and engineers dealing with telecommunications.

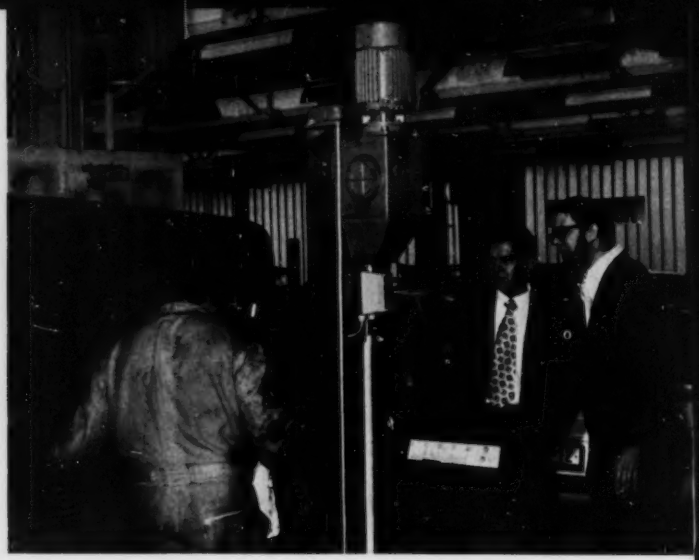
The U.S. executives had a highly useful and effective mix of group meetings and individual consultations. The mission made a group presentation on developments in the U.S. communications field to enthusiastic audiences of concerned specialists in both Moscow and Warsaw.

Robert R. Sanders, international vice president of General Telephone and Electronics, San Carlos, Calif., concluded that "the trade mission was surely the best possible introduction to the marketplace."

Firms represented

Business members, in addition to those already mentioned, and the firms they represented, were: Frank P. Barnes, International Telephone & Telegraph Corp., New York; Gerald P. Cantini, General Datacom Industries, Norwalk, Conn.; Ervin G. Gramman, Dynair Electronics Co., San Diego.

Also, John D. Nyquist, Collins Radio Co., Richardson, Tex.; Glenn R. Petersen, Mobile Radio Dept., General Electric Co., Lynchburg, Va.; Jack D. Phelan, General Dynamics Corp., St. Louis; Glen P. Robinson, Jr., Scientific-Atlanta, Inc., Atlanta; Jack W. Schrey, Magnavox Co., Fort Wayne, Ind.; Donald C. Stewart, Continental Telephone Corp., Hickory, N.C.; William I. Thomas, Pace Division, Pathcom Inc., Harbor City, Calif.; Joseph P. Ulasewicz, Radio Corp. of America, Camden, N.J.



INDUSTRIAL TOUR, PRAGUE—*Mission Director Arthur Pothuisje (left above), and members (next) L. P. Handy, Richard Bell, Thomas Cooper, and Gabriel Petre, at new Simca automative service facility, inspect tire wear on an axle unit just removed from Simca auto. New equipment in foreground is a Blackhawk Porto-Power unit distributed by Applied Power Industries, Milwaukee, represented on mission by Eugene Allen. In photo at right, member Bell (center) and Kent Brown of U.S. Embassy discuss front end alignment service operation being performed by Czech mechanic.*

Automotive Service Equipment Group Gears To East European Markets

As the Soviet Union, Czechoslovakia, and Hungary move along the road toward more and more vehicle use, the demand for automotive servicing equipment there — now virtually non-existent — is bound to increase.

A U.S. trade mission specializing in equipment for diagnostic testing, diesel testing, body repair, wheel alignment, frame straightening, service stations, and tire retreading and repair, returned from a visit to those countries earlier this month. The group welded its impressions into this market picture:

► The three-country population, about 265 million, has an estimated registration of some four million vehicles.

► All three countries' five-year plans call for doubling vehicle registration.

► Replacement parts are not readily available—generally from factory only. Repair shops are scarce. Gasoline service often means a one-hour wait.

► Most of the Government experts and technicians are knowledgeable about U.S. automotive service equipment and express preference for such equipment, because of its durability and advanced technology.

The U.S. businessmen met with officials of the Chamber of Commerce, the Ministry of Foreign Trade, and other Government agencies in each country. According to Mission Director Arthur R. Pothuisje of the Commerce Department's Bureau of International Commerce, "As the mission moved forward, the members were convinced that such contacts were essential and the only way to meet the end-user."

Everyone concurs

Eugene V. Allen, Applied Power Industries, Inc., Milwaukee, expressed the sentiment of all members: "The trade mission appears to be the only way to meet the decision makers within a reasonable time frame."

Three of the members who had discussions with State trading organizations estimate that four agreements may be concluded as a result of their contacts.

Member Louis Meyers, of Meyers Industries, Inc., Akron, Ohio, commented, "There is much need for our type of product—the market is vast—and if opened, could continue for years."

Country markets

The USSR's current five-year plan projects production by 1975 at 1.2 million autos per year. A sizable number of service centers are planned and construction has begun.

Soviet officials called attention to the automotive service equipment show scheduled in Moscow May 23-June 6, 1973. Several of the mission firms expressed an interest in exhibiting.

The current Czechoslovak plan contemplates a 35 percent increase in vehicle production from the 1970 base. Additional facilities, when they become available, will need dignostic and specialized repair equipment to make up for skill shortages.

In Hungary, vehicle registry is increasing at a rate of 60,000 a year. All cars are imported; some trucks and buses are manufactured.

Businessmen participants not already mentioned were: Richard J. Bell, Dreyco, Inc., New York; Thomas J. Cooper, Bacharach In-

strument Co., Pittsburgh, Pa.; L. P. Handy, Dresser Industries, Inc., Salisbury, Md.; Paul E. Moss, Paul E. Moss Co., Inc., Valley Stream, N.Y.; Gabriel L. Petre, Stewart-Warner Corp., Chicago; William A. Raftery, Motor & Equipment Manufacturers Association, Teaneck, N.J.; and Otis A. Sinnott, Hockman-Lewis, Ltd., East Orange, N.J.

Exporters Can Consult With Commerce Trade Specialists At NFTC

Businessmen attending the 59th National Foreign Trade Convention in New York on Nov. 13-15 will have the opportunity for individual consultations with U.S. Department of Commerce officials who are expert in four important areas of the world.

All members of the Bureau of International Commerce in Washington, D.C., they are: Morris Allen, Latin America; Stephen Conger, Africa; Chadwick Johnson, Japan; and J. Robert Wilson, European Economic Community.

An annual feature of the convention arranged through the Department's New York Business Service Office, the international trade consultations will be held in a special suite near the National Foreign Trade Council's convention headquarters in the Waldorf.

International trade specialists of the Department's New York office also will be available for consultation on government services and facilities to exporters and potential exporters, as will a market development specialist of the U.S. Maritime Administration to discuss ocean freight shipment problems and procedures.

Consultations may be arranged for half-hour periods on all three days of the convention on an appointment basis only. Interested businessmen are invited to contact the Commerce Department Field Office, 26 Federal Plaza (212-264-0629).

EXPORT GROUP BEGINS OPERATIONS—*Amatex, a textile machinery export trade association organized recently to promote sales abroad, is now fully operational with headquarters in Greenville, S.C., according to its president, L. Hugh Ballard. Amatex is the first textile machinery association to be formed under the half-century-old Webb-Pomerene Act, which permits U.S. manufacturers to work together in the promotion of export trade. On hand in Greenville for the announcement were (from left): Paul Quattlebaum, Jr., director of Commerce's Charleston Field Office; Ballard; Richard J. Smith, Bureau of International Commerce; and Russell A. Graham, president of Saco-Lowell and member of Amatex executive committee.*

Computer Equipment Display Caravans Will Tour Europe To Aid U.S. Sales

Exhibition caravans of U.S. computer equipment will fan out across Europe next year in a promotion organized by a trade publication serving the U.S. computer industry.

Commerce Department trade specialists are assisting in the preparation of the venture. At one point in the caravan itinerary, the exhibitors will join in a major exhibition of U.S. computer equipment conducted by Commerce.

The motorized caravans are being sponsored by the newsweekly, *Computerworld*. One, aimed at French-speaking customers, will tour Paris, Bordeaux, Marseilles, Lyon, Strasbourg and Brussels in the spring. The others have fall schedules. One is to visit Stockholm, Oslo, Copenhagen, Amsterdam, Glasgow, Manchester and London; the other, Hamburg, Duesseldorf, Frankfurt, Stuttgart, Munich and Berlin.

At Munich from Nov. 19-23 the caravan will be associated with the U.S. exhibition at Systems 73. The scope of this event is indicated in the results of the U.S. show at the predecessor Systems 71 last fall: 73 exhibitors reported $1,258,000 in floor sales and $71,786,000 in 12-month sales projection, and appointed 13 sales representatives, with 133 others being considered as the show ended.

At the 1971 show, delegations were received from six Eastern European nations, as a result of a promotional campaign that extended to 15 countries. Commerce's trade promotion officials expect Systems 73 to be the largest single presentation of electronic data processing equipment to be staged in Europe next year.

Trade specialists from Commerce field offices in the U.S. are participating in preparatory meetings.

Trade Fairs, Centers

Electric Power, EDP Shows Seeking U.S. Exhibitors

Electric Power Systems and Equipment: Italy. The U.S. Trade Center in Milan will display the products of about 35 U.S. exhibitors at a February 6-10 showing of electric power generating, control, test and maintenance equipment.

Projected public spending increases and the recent currency realignments make Italy an especially attractive market for small to medium electric power generating equipment.

ENEL, the Italian state electric power agency, is reportedly planning to spend $7 to $9 billion on expanding its facilities during the 1972-75 period. Traditionally, ENEL has relied on domestically supplied or German-produced equipment, except in instances where quality was the over-riding consideration, and then U.S. suppliers were relied upon. Now, domestic suppliers, because of labor problems, have fallen behind on delivery schedules and German producers, because of the currency realignments, are not as competitive as they once were. Thus U.S. products, long held in high esteem for their quality, are now even more attractive because they are more price and delivery competitive.

During 1973 it is projected that Italy will purchase power generating and ancillary equipment worth $254 million and the market is growing at the rate of 10 percent annually. Power sources account for approximately 70 percent of the market with the remaining 30 percent allotted to control, test and maintenance equipment.

U.S. Trade Center exhibits traditionally draw visitors from markets outside the country in which they are held. In Milan it is not unusual for 10-15 percent of the visitors to come from Switzerland, France, Spain, Austria and Yugoslavia.

For full information on exhibiting, call John Wolf at 202-967-4941, or write him at BIC-948, U.S. Department of Commerce, Washington, D.C. 20230.

Electronic Data Processing, Reprographic, and Office Equipment: Hong Kong. The Commerce Department has scheduled a June 18-23 exhibit of U.S. EDP and office equipment to help American suppliers reverse the deterioration in their share of this promising market.

Hong Kong's imports of EDP, business equipment, posts, and supplies held steady at about $17 million during 1970 and 1971, although showing a substantial increase over 1969's $7.6 million. The U.S. share of such imports, however, dropped drastically, from 52 percent of total (or $8.935 million) in 1970 to 23 percent of total (or $3.854 million) in 1971.

U.S. equipment has enjoyed an excellent reputation and strong market position for many years. Competition from Europe and Japan has increased steadily, particularly in the field of typewriters, adding machines, calculators, and cash registers.

U.S. bookkeeping and accounting machines and photocopy equipment have also been top sellers, but they too are beginning to face stiffer competition from leading foreign suppliers.

Some computer service bureaus, both privately owned and sponsored by equipment manufacturers, are actively marketing time-sharing and consultative services. There is also evidence of strong interest in mini or desk-top computers.

For details, call Thomas R. Padgett at 202-967-4727, or write him at BIC-958, U.S. Department of Commerce, Washington, D.C. 20230.

Nothing 'Small Potatoes' About Between-Show Events

There's nothing "small potatoes" about a between-shows-promotion at a U.S. Trade Center overseas. The Burroughs Corp. recently used the facilities of the Sydney Trade Center during the interval between major exhibits to stage "the biggest business equipment showing the firm ever assembled in the Southern Hemisphere."

Many of the items were being introduced to the Australian market, and the total value of the items on display amounted to $1 million. Attendance totaled 2,000.

H. R. Stewart, manager of Burroughs' Sydney office, said the exhibition was "of tremendous institutional value, and provided us with a great number of valuable business leads."

Another recent between-show event at Sydney featured 20 small, individual exhibits, each showing a marketing or training film which Audio Visual Promotions had prepared for Australian subsidiaries of U.S. manufacturers. Thus, in addition to viewing the quality of Audio Visual's work, the 816 visitors to the show also learned about the products of 20 of its individual client companies.

"Without the space provided by the U.S. Trade Center, it would have been impossible to arrange an exhibition of this type," said Audio Visual's managing director.

Beirut's Middle East Regional Trade Development Center reports that a Michigan export manager staged an exhibit of modern kitchen equipment between shows at the Center. The firm expects between $500,000 and $1 million in Middle East sales to result in the coming year.

Osaka Facility Opens With Textile Display From South Carolina

The first permanent foreign-government-operated trade promotion display facility in Western Japan opened early in September with a display of U.S. textiles in Osaka.

American Merchandise Display Osaka (AMDO), opened with a reception for Japanese representatives of American firms and more than 70 Japanese newspaper and magazine writers on September 1.

The first show conducted at the new facility was an exhibit of products of the South Carolina textile industry, conducted by members of a textile trade mission touring the Far East in behalf of the State.

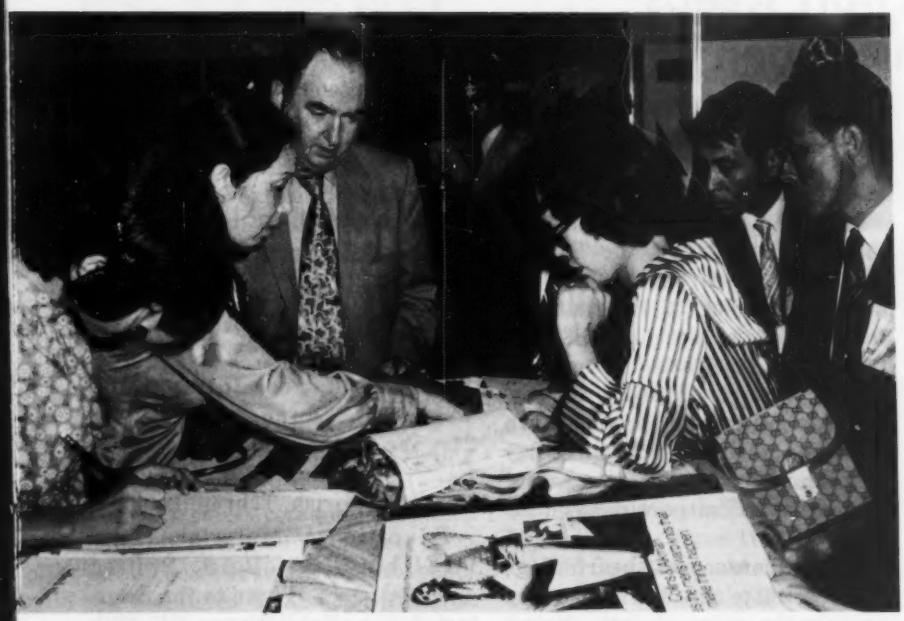
SIGNING IN—*Visitors registering at the opening exhibit at the American merchandise display facility in Osaka which will serve the West Japan market.*

Top flight visitor

"Mr. Textiles of Japan," Toyosaburo Taniguchi, was on hand personally to congratulate South Carolina Lt. Gov. Earle Morris, Jr. on the quality of the exhibit. Mr. Taniguchi said he was pleased to see the American textile industry entering the Japanese market and felt that increased two-way trade in textiles could help to relieve existing tensions between other industries in both nations.

AMDO is the second permanent trade promotion center in Japan operated by the U.S. Department of Commerce. The U.S. Trade Center in Tokyo, which opened in April 1963, and AMDO now offer American firms and their Japanese agents two rent-free, modern exhibition centers for the promotion of American products in Japan.

The new facility in Osaka indicates the importance that the American Government and private U.S. industry place on the Kansai and Chubu regions. AMDO offers approximately 2,000 square feet of exhibition space, a businessmen's lounge complete with limited kitchen facilities, modular exhibit display systems, and a full range of audio-visual and seminar equipment and furniture. Like its Tokyo counterpart, AMDO is classified as a bonded warehouse, permitting exhibitors to bring into Japan products for exhibition purposes without complete customs formalities.



CLOSE SCRUTINY—*Charles Gallagher (center), of Collins and Aikman, assists Japanese dress designers at showing of South Carolina textile products.*

Schedule shows early

Many Japanese trading companies and U.S. firms started scheduling private displays of the American products they want to sell in Kansai and Chubu several months prior to the opening.

Scheduling is controlled for both the Osaka and Tokyo trade promotion centers by staff members at either location, as well as through the Foreign Export Promotion offices of the Bureau of International Commerce (BIC-950), U.S. Department of Commerce, Washington, D.C. 20230.

THEY ALL CAME—*Part of the standing-room-only crowd which jammed each session of a three-day symposium staged by U.S. businessmen and Federal agencies in the U.S. Embassy at Bogota. The cream of Colombia's civil aviation industry attended the briefings on U.S. aviation safety equipment and airport modernization capacity.*

Swift Symposium Effort Keeps Door To Export Sale Open To U.S.

The door to an export sale that could eventually total $75 million seemed to be closing on U.S. suppliers. The Colombian Government had issued a call for tenders on from $20-$32 million in airport safety equipment. The tender had indicated that bids should be submitted through a foreign government or a single, prime contractor.

One European government, already in a favored position due to previous aviation sales, had dispatched a special governmental task force to woo the leaders of Colombia's civil aviation industry.

Could the United States act in time to avert a shutout of U.S. bidders?

Almost overnight, Commerce's Bureau of International Commerce assembled an industry-government team which included representatives of 14 aviation industry firms, the White House, the Federal Aviation Administration, the Export-Import Bank, as well as the Department's Office of International Business Assistance and Office of International Trade Promotion. Quicker than it takes to tell the tale, this group was winging down to Bogota to conduct a three-day symposium on U.S. aviation safety equipment and airport modernization.

The response was heartening; every session in the three-day event in the theater of the brand new U.S. Embassy attracted a standing-room-only crowd which included all of the leading figures in the Colombian civil aviation industry.

At least one, and possibly more, U.S. participants expect to submit bids on this first of a major series of tenders which could eventually total as much as $75 million.

In short, a U.S. firm may or may not win this choice contract, but the result has not been foreclosed for lack of trying . . . and an example has been set of all-around hustle and cooperation.

Caracas Auto Show Wants U.S. Exhibitors

U.S. manufacturers of automotive equipment and accessories are being invited to exhibit their goods at the First Automotive Exposition of Venezuela, Jan. 19-28.

The Ministry of Development has placed a restriction on the import of standard vehicles for display, but will permit free entry and re-export of any type of experimental vehicle, special-purpose vehicles not made in Venezuela, racing cars, accessories and special displays.

For full details, write: Antonio J. Ramos, Coordinador General, I Exposicion Automotriz de Venezuela, Museo del Transporte — Parque del Este, Caracas. (Cable address: EXPOAUTO Caracas).

Two International Shows Invite U.S. Participants

U.S. firms are invited to exhibit their goods at two overseas trade fairs scheduled for 1973:

General-Purpose International Exhibition, Tehran, Iran, Sept. 11-21. Write the Iran International Fairs and Exhibitions Corp., P.O. Box 22, Tadjrish, Tehran, Iran.

Educational Materials Fair-PAEDAGOGICA, Basel, Switzerland, Oct. 9-14. Write to the Secretariat for Exhibitions, CH-4021, Basel, Switzerland.

Worldwide Business Outlook

Canada's Fast Movement Seems Likely To Continue

Canada is in its third straight year of solid economic growth.

During the second quarter, real output expanded at an annual rate of 8.4 percent, and most forecasters see real growth for the year of 6 to 7 percent.

The U.S. Embassy in Ottawa reports that the economic record to which the Trudeau Government has pointed, in its bid for reelection Oct. 30, includes vigorous growth and one of the lowest inflation rates in the industrialized world. The opposition has noted chronic unemployment and recent price rises.

Since mid-1970 over 500,000 workers have joined the labor force, and seasonally adjusted unemployment has averaged over 6 percent, even though 7 of 8 new workers have found jobs. Since the Economic Council of Canada estimates a real growth rate in excess of 6 percent is required to reduce the unemployment rate, some improvement should be seen in coming months.

Brisk fiscal stimulus

Concern about unemployment goes far to explain the government's series of budgets authorizing public works projects, increasing pension and welfare benefits, and cutting personal and corporation taxes. Consumer spending encouraged by fiscal policy accounted for most of the 1971 growth in GNP. The new budget in May shifted the emphasis to expanding business investment.

The business community reacted bullishly to a $500 million corporation tax cut, revising capital spending estimates to about 7 (instead of 5) percent above last year. Though this figure is low compared with the increase of 11 percent in 1971, further increases are a virtual certainty, particularly when viewed against the surge in demand in recent months that has depleted inventories.

Monetary policy also has figured in the expansion, which has been fueled by lower interest rates and rapid credit and money supply expansion. Much of the monetary ease has been designed to avoid pressures on the exchange rate from short-term capital flows seeking higher interest rates. This external consideration helps explain why increases in liquidity have outpaced demand and inflationary dangers have developed.

Although the inflation rate (GNP price deflator) was only 3.2 percent in the second quarter, consumer and wholesale price indexes are rising substantially.

With exchange rate considerations limiting the use of monetary restraint, the work of gently applying the brakes falls on the fiscal side. The 3 percent temporary cut in personal income tax, made in October 1971 to stimulate demand, is to expire Jan. 1, 1973. Although the revenue is not needed, the tax increase could prove to be just the remedy for incipient inflation. While there is little enthusiasm for price and wage controls, government leaders have said that they would not hesitate to apply controls if necessary.

On balance, the assessment of the dangers of inflation and possible corrective measures will depend on economic conditions in the United States. Since trade with the United States accounts for some 13 percent of Canada's GNP, better price behavior in the United States will both require and facilitate restraint of inflationary pressures in Canada.

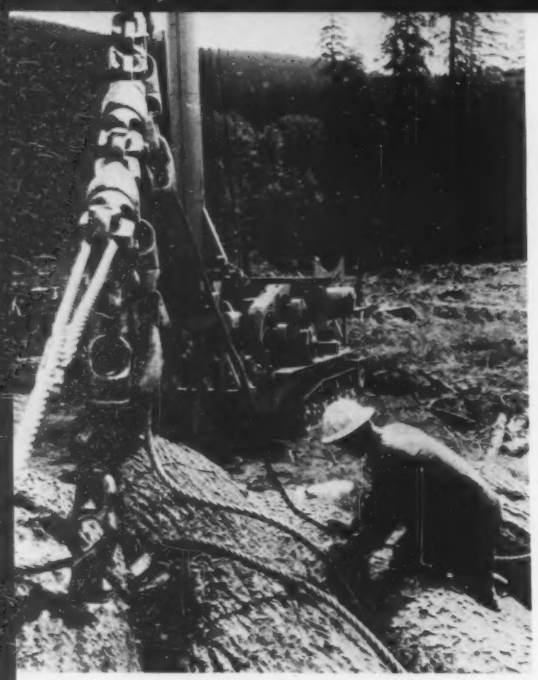
Compared with 1971, Canada's trade performance with the United States so far this year (January-August) has been significantly better than with the rest of the world (exports to U.S. up 14 percent, to rest of world down 1 percent; imports from U.S. up 17 percent, from rest of world 30 percent), and this performance has taken place in Canadian dollars, which appreciated some 6 percent in the first few months after June 1, 1970, when the rate was unpegged, and whose rate (expressed in U.S. dollars) since has been remarkably stable—a stiff "snake" in a thin "tunnel" at about $1.01 until early this year, when the tunnel shifted to about $1.02.

At present $1.02 seems to be a rate regarded as tolerable by Canadian business. For example, heavy borrowing by provincial governments in the United States during the first half of 1972 seemed to be pressing the rate higher and set off much critical comment, after which the volume of borrowing fell off, whether because of fulfilled needs, criticism by business, or suasion from Ottawa.

On the evidence so far available, at this rate of exchange Canadian suppliers are suffering no serious disadvantage in selling in the United States, and U.S. suppliers are enjoying no appreciable exchange rate advantage in selling in Canada.

Act ended uncertainty

Introduction of the Foreign Takeovers Review Act in May ended a long period of uncertainty in business circles about government policy. Under the proposed legislation, takeovers of existing large Canadian firms by foreign interests would be subject to a decision by a screening agency that the transaction would bring "significant benefit" to Canada. Although the bill died with the dissolution of Parliament in August,



IN BRITISH COLUMBIA—*Continued growth of Canada's forest products industry offers sales opportunities for wood harvesting and log hauling equipment.*

the government has stated its intention to reintroduce the legislation if it is reelected. While the proposed legislation would introduce governmental intervention into certain international business transactions, it seems unlikely that it would result in a significant decline in investment.

Canada's GNP will exceed C$100 billion this year. Businessmen are heartened by improved profit margins and recent tax cuts. Growing consumer demand is backed by ample savings and credit and the broader availability of unemployment insurance.

U.S. shares in growth

U.S. exports have shared in this growth and will continue to do so. However, Canadian imports from Japan are up 54 percent so far this year and from the Common Market 29 percent, compared with the 17 percent increase from the United States. The U.S. share of the market is now about 69 percent of Canada's total imports (72 percent in 1969). Automobiles and parts, under the Automotive Products Agreement, account for much of the U.S. increase.

The surge of housebuilding continues. A record of 245,000 starts is expected this year (233,000 in 1971); and housing needs for 1972-76 will rise to 1.3 million units worth C$42 billion from the 900,000 units worth C$18 billion produced in the five years ending in 1971.

The largest current and proposed major capital and public works projects offering opportunities to U.S. exporters of goods and services include the C$5 billion Mackenzie Valley Gas Pipeline (still two or three years away), the C$6 billion James Bay hydroelectric power project in Quebec, the Montreal subway extension, the new international airport for Montreal, the office and hotel construction boom in Metropolitan Toronto, and the Nelson River hydroelectric project in Manitoba.

Development of Alberta's Athabasca tar sands is expected to proceed at an expanded pace, as other companies have indicated a desire to follow Syncrude in building new C$400 million extraction plants. A proposed C$2.5 billion Japanese investment in Athabasca is under consideration, and Japan is expected to be an important bidder for the eventual Mackenzie Delta pipeline project.

Toronto leads North American cities in commercial building. The C$1 billion Metro Centre project of the Canadian National and Canadian Pacific Railways is before the Ontario Municipal Board for approval. The Royal Bank of Canada will start construction of a C$100 million office block next spring, and Western International Hotels plans to break ground this year on a 600-room hotel and office tower.

These and similar, if smaller, projects in Montreal, Vancouver and Winnipeg (its "inner city" will cost over C$250 million) represent good sales prospects for U.S. building materials and installations, construction equipment and office and hotel furnishings.

With development of new port facilities along the lower St. Lawrence River and the continuing growth of container shipments, there is a good market for materials handling equipment. Halifax has just acquired its fifth containership line, and, with the port's limited holding space and consequent reliance on quick onward movement of containers to avoid clogging, seems to offer a market for cranes and other cargo handling equipment.

There is a steady demand for medical and hospital equipment, including surgical and ophthalmic instruments and the market that has developed for pharmaceutical products manufactured from organic products as opposed to synthetics.

Continuing growth of industrial production offers U.S. manufacturers good sales prospects for machine tools; wood harvesting and log hauling equipment and other machinery for the forest products industry; and derricks, winches and conveyor systems for the mining industry.

Other opportunities

Other specific export opportunities include ore treatment and handling machinery, high quality silicon, abrasives for cutting metal, chemicals for plasticizers and the paint industry, metalworking machinery, hydraulic fluid power motors, thermoplastic resins, and printed circuit boards.

Pollution control equipment is in steady demand, and municipal governments and many companies have budgeted large sums for extensive anti-pollution programs. Hamilton, Ontario, for example, estimates that cumulative public and private pollution abatement costs will reach C$200 million by 1975. The Steel Co. of Canada, Ltd. at Hamilton is committed to spending over C$20 million this year. A federal government official estimates that it will cost C$700 million to clean up the pollution injected into Canadian waters by the pulp and paper industry alone, and this industry accounts for less than

half the polluting of Canada's waters. In the air and water pollution control equipment category the Embassy has received specific inquiries for electrostatic filters, and stokers, ovens, cooling towers and precipitators for municipal incineration.

According to a recent survey, consumer optimism and intentions to buy are at the highest point since 1966, and current buoyant demand is expected to extend well into 1973. This, coupled with the disposable income to give effect to the demand, will keep the consumer goods boom going through most of Canada. Demand embraces durable goods, such as household appliances and furnishings, automobiles, motor homes, camping trailers and boats, to clothing and food and sporting and leisure time goods, including novelties and do-it-yourself equipment.

Consistent with the trend of recent years, Canada's imports of agricultural commodities from the United States during the first six months of 1972 continued to grow. Canada's official trade statistics indicate the value of principal agricultural imports from the United States for January-June 1972 at C$342 million compared to C$309 million in the same period last year.

Provincial developments

U.S. Consulates across Canada have identified developments having interest and possible implications for U.S. business. Moving westward across the country these include:

Newfoundland — Newfoundland is reviewing its control over the offshore oil and gas industry, and may take back some of the oil and gas exploration permits granted in the 400 million acre potential oil and gas fields off the east coast.

Ontario—Pending legislation will require that a majority of directors of Ontario corporations be resident Canadians by Oct. 1, 1973. The bill, scheduled for debate this fall in the Ontario legislature, is not likely to impose onerous new requirements.

Saskatchewan — The provincial government announced in August that a Romanian company has decided to set up a tractor assembly plant in Saskatchewan to fill the needs of Saskatchewan farmers for smaller size tractors. Also, hearings on a proposed bill prohibiting outsiders from owning farm land in Saskatchewan are being held throughout the province, and the bill presumably will be re-introduced at the next Legislative Assembly.

Alberta—The province's energy development policy guidelines are expected to be issued early in 1973 and could affect future foreign investment in the province.

British Columbia — Imports through British Columbia ports from Japan rose 52 percent in 1971 (to $358 million) from 1970, whereas the increase from the United States was 9 percent (to $668 million). In British Columbia, Japanese firms have registered increases in sales, including carbon steel, wire rope, wire nails, generators, bicycles, motorcycles, and electric washing machines.

The Japanese business presence is evident throughout Canada from British Columbia to the Maritimes; and imports of Japanese machinery and advanced electronic equipment, as well as automobiles and electronic consumer products, are increasingly evident on the Ontario market.

Big Investment Outlays Should Help Brazil Maintain Top Growth Pace

Brazil's economy continues to grow at an extraordinary pace.

Gross domestic product is expected to increase over 10 percent in 1972, reaching approximately $50 billion. With large public investments under way and Brazil's record of economic success and stable political climate attracting private investment from both domestic and foreign sources, the outlook for maintaining the rising momentum of the economy is excellent, according to the U.S. Embassy in Brasilia.

Industrial production is expected to rise about 12 percent, slightly higher than last year's 11.4 percent. Based on first half results, even this high projection appears conservative. Manufacturing production during the first six months of 1972 increased an exceptional 14 percent, and equal or better results were likely in the third quarter.

Some of the industrial sectors with the higest growth rates during the first half were: transportation equipment (25 percent); metallurgy, electrical material, machinery, and communications equipment (18 percent); food, beverages and tobacco products (18 percent); non-metallic minerals (13 percent), and chemicals and petrochemicals (13 percent).

The performance of agriculture in 1972 has been excellent, with a projected overall growth rate of 8 percent, crop production (including coffee) up approximately 11 percent, and animal production increasing around 5 percent.

A good indicator

A good indicator of the tempo of industrial investment is the amount of investment benefitting from fiscal incentives administered by the Industrial Development Council (CDI). During the first six months of 1972, the CDI approved incentives for investments totalling about $1 billion, substantially more than the $758 million in investments approved in all of 1971. The main beneficiary of the CDI's fiscal incentives was the steel industry,

which alone accounted for about $700 million of the total.

Since one of the principal incentives granted by the CDI is exemption from customs duties on imported machinery and equipment without national similars (i.e. similar to machinery and equipment manufactured locally), it is likely that machinery imports will continue at a high level over the next year.

Decree Law 1,236, passed Aug. 28, provides additional incentives for investment in export-oriented industries. Under this Law, whole factories may be imported without payment of import duties if their production is destined primarily for export. Since the exemptions apply to machinery which is used or similar to machinery produced locally, the Government will take care to ensure that the machinery is not obsolete and that the investment will complement rather than replace export opportunities available to Brazilian industry. There are reportedly numerous projects which may benefit immediately from this legislation.

Investment goals

General investment goals for the 1972-1974 period are given in the government's First National Plan for Economic and Social Development. Priority sectors are: education ($5.2 billion), agriculture ($2.6 billion), housing ($2.9 billion), and health-sanitation ($2.5 billion), all areas of high social import. Projected investments in infrastructure include $4.1 billion for energy (chiefly electric power), $3.4 billion for transportation (over half for highways), and $500 million for communications. In the area of industrial development, public and private expenditures are expected to reach $5.1 billion, including $1.3 billion in the mechanical and electrical industries, $1.2 billion for steel, and $900 million for chemicals and petrochemicals.

The Government is making excellent progress toward achieving its goal of reducing the rate of inflation to 15 percent in 1972.

Brazil's merchandise balance of trade is expected to continue in deficit. Including net transfers abroad for services and remittances of interest and dividends, the current account deficit in 1972 is expected again to total over $1 billion. This large deficit will be more than offset by a large net capital inflow, which may exceed $2 billion. Brazil's foreign reserves continued to rise sharply, increasing from approximately $1.75 billion at the beginning of 1972 to around $2.5 billion by mid-year.

Exports are soaring and could total $3.7 billion by year end, up an impressive 27.5 percent over last year. Sugar exports, benefitting from high prices and shortage on the world market, will more than double, increasing from $150 million in 1971 to between $350-400 million this year. Green coffee exports, also receiving windfall benefits from price increases resulting from freeze damage to coffee trees in Parana, are expected to exceed $1 billion, up an estimated $150-200 million over 1971. Exports of manufactured products have continued to respond favorably to fiscal incentives and, if the buoyant trend in the first half continues (plus 39 percent), will exceed $1 billion and may overtake green coffee as Brazil's main source of export earnings.

Imports have also been increasing at a rapid pace and are expected to reach $3.9 billion or possibly more in 1972, a rise of 20 percent. Product categories with highest estimated increases during the first half were: machinery and equipment (41.3 percent); chemicals (32.5 percent); and petroleum (31.6 percent).

Brazil's booming economy and stable political climate continue to present favorable conditions for further expansion of U.S. exports and investment in Brazil. As Brazil's principal supplier (32.5 percent share of imports in 1970) and source of foreign investment (48 percent share of foreign investment registered with Central Bank in 1969) the United States has an important stake in the Brazilian economy.

U.S. trade statistics show that U.S. exports to Brazil totaled $966 million in 1971, an increase of 14.9 percent over 1970. U.S. direct investment in Brazil rose an estimated $200 million in 1971, bringing total U.S. investment in Brazil to around $2 billion (book value).

With favorable Eximbank financing available to them, U.S. suppliers are in an excellent position to win contracts to supply a good share of the machinery, equipment and raw materials needed to meet Brazil's ambitious investment and production goals. During the January-June period, Eximbank authorized loans which, if fully utilized, would cover approximately $600 million of exports of U.S. machinery and equipment for a wide range of investments—e.g. steel, electric power, transportation (automotive industry, airport, aircraft, subway), petroleum, chemicals.

Eximbank has credits

Eximbank also has large outstanding credits with Brazilian investment and development banks under its Cooperative Financing Facility and Relending Facility programs aimed at increasing U.S. exports of goods and services to small and medium size firms in Brazil.

U.S. suppliers may also compete for contracts to supply goods and services for projects financed by the World Bank (IBRD) or the Interamerican Development Bank (IDB). In Brazil, the IBRD authorized about $440 million in financing in FY 1972 (steel, highways, iron ore, hydroelectric power) and the IDB's tentative lending program for CY 1972 (steel, petro-chemicals, highways, agriculture, irrigation, power) is $220-250 million.

Sweden's Cyclical Upturn Seen Gaining Momentum

The Swedish economy is now recovering from the sharp 1971 recession.

The cyclical upturn, led by export demand, is expected by the U.S. Embassy in Stockholm to continue gaining momentum during the second half of 1972, assuming that international demand continues to grow.

Swedish official predictions call for real GNP growth in 1972 of about 3.5 percent. However, most non-official observers believe that the later than expected recovery will hold overall growth this year to a somewhat lower figure. In any event, there will be substantial improvement over the 0.3 percent rate achieved in 1971.

Unemployment is falling

With the upturn in economic activity, the unemployment picture has brightened considerably. From a high of 3.5 percent in January of this year, the rate of unemployment had dropped to 2.2 percent by June.

Liquidity of most private business concerns, which improved substantially during 1971, is still quite strong. Nevertheless, bankers have been warning that credit may become tighter. In view of the current stage of the business cycle and judging from past experience — particularly the government's concern about Sweden's balance of payments—it would seem logical to expect restriction of credit this winter.

Following the pattern of 1969 and several other previous periods of increasing economic activity, the business pickup now taking place is being led by a rise in export demand. Swedish exports during the first five months of 1972 were 6 percent higher, in current prices, than exports during the corresponding period of 1971. Expectations for the full year are for an increase of just over 7 percent.

Recovery in Sweden's export markets should create strong demand for Swedish exports in the remainder of 1972 and the first half of 1973. While Swedish direct exports to the United States are only 7 percent of total exports, expansionary conditions in the United States attract imports from Europe and thus stimulate the European economies, which are Sweden's principal export markets.

Export demand is likely to exceed Sweden's capacity to meet it: recent expansion of production capacity has been slow, productivity growth, although expected to rise in 1972, is lower than in former times and there is always a shortage of skilled labor.

Sweden's imports increased by about 7 percent, in current prices, during the first five months of 1972. Imports for the entire calendar year are expected to increase by more than 9 percent.

In light of the sharp increase predicted for imports and the steadily deteriorating balance on tourism and other invisibles, Sweden's balance of payments—which has been relatively favorable for the past year and a half—is expected to worsen during the coming winter.

Gross domestic investment, in constant prices, is estimated to have decreased by 3.5 percent in 1971. Some of the major elements which contributed to this decline were substantial reductions in residential construction, local government investments (excluding dwellings and industry), and investment in commercial construction and equipment.

Government estimates for gross domestic investment, in 1972, predict an overall increase of 5 percent from depressed 1971 levels. This estimate is generally believed to be on the high side, particularly in light of the decision to double the employers' payroll tax as of Jan. 1, 1973. Some investment may be postponed since the increase in tax from 2 to 4 percent will have an obvious impact on profits.

Nevertheless, expenditures on industrial machinery and equipment rose 2.5 percent in 1971 (in constant prices) and should be considerably higher this year when the economy is expanding. Thus, on balance, there should be an improved market for U.S. investment goods in the remainder of 1972 and early 1973.

U.S. exports to Sweden, both in absolute terms and as a share in the total Swedish import market, have declined over the past year and a half. The primary cause was the Swedish recession. Another likely cause was that recent Swedish imports have included a larger component of consumer goods and a smaller component of investment goods than during the preceding period.

Sales prospects improve

Swedish industries which are expected to make the greatest increases in their investments in machinery and equipment in 1972 are the chemical industry (including rubber, petroleum and coal), the engineering industry (i.e. machinery, metal fabrication and transport equipment), public utilities, (including electricity, gas and water works), iron and steel and other metal working industries, and mining. U.S. suppliers of equipment for these industries should find improved sales opportunities in coming months.

As a result of the predicted increase in domestic consumer demand and the replenishment of stocks, imports of consumer goods are expected to rise by some 15 percent between 1971 and 1972, in current prices. U.S. suppliers of

U.S. TRADE CENTER FOR SCANDINAVIA—*A representative of Gould, Inc., Cleveland, demonstrates direct writing recorders at an electronics show earlier this year.*

labor-saving household products and other consumer goods may benefit if they are alert.

Imports of food products are expected to share in the anticipated general increase in imports of consumer goods in 1972, although probably at a rate of less than 15 percent. This increase is likely to be most pronounced for convenience foods, fresh and processed fruit and vegetables and fats and oils. The first two groups are favored by higher income and employment levels and a consequent feeling of security among consumers.

Imports are favored

Imports of American marine oils, soybean, cottonseed and peanut oils are favored by a decline in butter consumption and restrictions in the use of domestic rape seed oil. On the other hand, the prospect of another good crop is likely to keep imports of U.S. grain in 1972 at a minimum level of a few thousand tons of wheat and up to 30,000 tons of corn.

The concessions made so far by Sweden to the EEC with respect to wine, grapes, peaches, cauliflower, carrots and certain flowers and bulbs will in the long run have some detrimental effect on U.S. exports of these commodities unless the concessions are extended to third countries, which at present seems unlikely. In addition, certain protection for manufacturers of a number of processed foods will be eliminated with respect to imports from the EEC.

Since a complete list of these products is not available and since the special protection for some of these products is a part of a single tariff, it is not yet possible to evaluate the effect on U.S. exports. It seems probable, however, that these concessions will have a detrimental effect on U.S. sales to Sweden. The parties have also agreed to seek further liberalization of agricultural trade and to apply sanitary and veterinary rules with leniency. In the long run, this agreement could also cause difficulties for U.S. exports.

With the signing on July 22 of the EEC agreement, Sweden's long negotiations for a link with the Common Market came to an end. The agreement, covering only industrial goods—with long transition periods for paper, steel and other "sensitive" products — falls short of the customs union sought by Swedish negotiators. Spokesmen for industry, particularly the "sensitive" sectors, are not happy with the agreement. Virtually all Swedes, however, are relieved that the uncertainty is over and believe that the agreement offers favorable opportunities for Swedish exporters.

The most likely immediate result of the agreement is that Swedish industry will make a greater effort to work out production and sales arrangements with industry within the expanded EEC. The already strong orientation toward Western Europe (some 75 percent of Swedish trade is with the EEC-EFTA countries) is likely to increase. Thus there may be some shift away from U.S. suppliers, particularly if the new rules of origin have an adverse impact on the components and parts trade with the United States.

Share for U.S. subsidiaries

On the other hand, the current expansive phase of the Swedish business cycle will favor imports from all sources. U.S. subsidiaries in Western Europe, moreover, will share importantly in any expansion of Swedish purchases there.

The U.S. Trade Center for Scandinavia, located in Stockholm, is an outstanding forum for American firms and their agents in this market. Focusing exclusively on products with excellent sales potential, the Trade Center has scheduled the following exhibitions: Pollution Control Equipment, Dec. 4-9, 1972; Electronic Components, Jan. 29-Feb. 3, 1973; Metal Parts Production Equipment, March 5-10, 1973; and Materials Handling Equipment, April 9-14, 1973.

The Trade Center will also direct an exhibition of American equipment for the shipbuilding industry at NOR-SHIPPING'73, a fair to be held in Oslo, Norway, May 2-9, 1973.

Investment Foresight, 'Selling Job' Suggested For Guatemalan Market

The rate of economic growth in Guatemala, after slowing moderately in 1971 from the high rates achieved earlier, appears to be accelerating again.

The causes of this current upward swing, reports the U.S. Embassy in Guatemala City, are essentially the same as those that underlay previous fluctuations — changes in commodity export performance. Given the nature of the current changes, especially higher coffee prices, it seems probable that a relatively high growth rate will be maintained through 1973.

In 1971 the Guatemalan Government began implementation of a five-year development program designed, in part, to offset externally dictated changes in the economy. Administrative difficulties that could continue into 1973 have held public investment below planned levels, however.

Partially offsetting the favorable impact of the commodity situation is the continued institutional deterioration of the Central American Common Market. By discouraging new industrial investment and limiting demand for Guatemalan manufactures, this disruption has indirectly dampened Guatemala's demand for capital goods and raw materials imports. The decline in regional demand has not been countered by a like increase in domestic demand despite the increase in commodity export earnings.

The problem is primarily one of income distribution and will be attacked by the programs of the development plan. In the meantime, however, the combination of rising commodity exports and relatively weak consumer demand has raised international reserves and domestic monetary liquidity to record levels.

Although conditions for doing business are favorable, demand must be stimulated. The factors, both emerging and traditional to the Guatemalan scene, that affect the operations of U.S. investors and exporters generally imply very favorable business conditions. Naturally some difficulties can be foreseen during the forecast period, but they are of the type that can be overcome through careful planning and energetic salesmanship.

The settlement reached earlier this year between Boise Cascade and the Guatemalan Government on the disposition of Boise Cascade's local subsidiary,* Empresa Electrica, *has important implications for U.S. investors in Latin America. As the 50-year contract under which it operated expired on May 22, the electric power utility was bought by the Guatemalan Government for $18 million. Instead of insisting on payment in long-term bonds—a practice common elsewhere—the Guatemalans deposited this sum in U.S. currency in Boise Cascade's New York bank account. This took place even before the utility changed hands.

The agreement did not come easy; it was reached only after several months of arduous negotiations. But according to Boise Cascade President R. V. Hansberger, his firm was "treated fairly and equitably by the Guatemalan Government."

The American Chamber of Commerce of Guatemala has praised the responsible behavior of both parties during the negotiations and considers the settlement an example to be followed elsewhere in Latin America.

Consider first the positive factors. Guatemala is a traditional market for the U.S. exporter and a long-time base for the U.S. investor. Despite the fact that the U.S. share of the market has slipped in recent years, U.S. goods are held in high regard and consumer receptivity is generally good. (The devaluation of the dollar is thus permitting Guatemalan importers of various product lines to return to the goods they naturally prefer.)

The attractiveness of Guatemala's tradition of monetary, fiscal and balance of payments stability to both investors and exporters similarly cannot be regarded lightly. Note also Guatemala's stable governments in recent years and well-balanced sense of nationalism.

Add to these positive factors of relative long-standing the commodity outlook with its implications for foreign reserve accumulation and domestic monetary liquidity; there is little likelihood of a payments or credit problem in Guatemala in the foreseeable future.

Consider then the fact of the Government's wide-ranging five-year development plan that eventually may raise consumer purchasing power among the working classes and create specific product demand in such areas as health and education facilities and small scale agriculture.

Finally, review the continued expansion of commercial agriculture and the parallel growing demand for more sophisticated agricultural inputs and Guatemala clearly emerges as a good place to do business.

Now the difficulties

Turning to the difficulties, against this long, positive list of implications to be drawn from the current Guatemalan economic situation must be set the obstacle of constrained demand. Demand is

constrained by both external and internal factors.

Externally, the Common Market situation means that new investment in manufacturing is likely to proceed slowly and thereby dampen demand for imported capital goods. To the extent that regional trade is arbitrarily limited, the situation also means limited demand for imported raw materials and intermediate goods.

Under optimum circumstances, growing domestic demand might offset regional trade problems but, unfortunately, this is not likely to happen. The principal constraint on domestic demand during the forecast period is the pattern of income distribution. Thus the growth of liquidity stemming from commodity exports generates directly relatively little consumer demand, and then primarily for sophisticated goods that are purchased only infrequently.

It might be otherwise if the financial intermediaries would employ the funds on deposit with them in an aggressive manner that reached out to more people, but that does not appear to be the mood of the moment. An alternative method of increasing working class purchasing power is through the government's development program, but that also has not yet begun to bite.

Accepting the fact that demand for U.S. goods probably will lack vibrancy during the year ahead—notwithstanding the existence of what otherwise is a very favorable business climate—is not to conclude that the enterprising exporter cannot find numerous sales opportunities here.

Many opportunities

Although few new industrial investments are under way, many local manufacturers are in the process of re-equipping themselves. In a sense, the Common Market situation is actually stimulating such activity in that it is requiring greater levels of efficiency from many manufacturers. Similarly, although the development program is a bit behind schedule, it already offers many sales opportunities.

Opportunities are greatest in the field of agricultural inputs, both because of the commodity boom and because the development plan concentrates on agriculture. Next in importance would come packaging equipment and upgraded machinery for the food processing and textile industries. Finally, consideration should be given to the equipment intensive programs of the development plan that have definitely been inaugurated. Opportunities exist, for example, for the sale of hospital and communications equipment and construction gear of various types.

Just as sales opportunities await the energetic exporter, the potential investor should not turn away without careful examination of the situation. Although the disruption of the CACM naturally requires that proposals for investments based on regional sales be carefully considered, investment for the home Guatemalan market and, especially, the extra regional market warrants examination.

When the generalized tariff schemes offered by the developed countries of the world to benefit the trade of the underdeveloped countries become fully operative, Guatemala's strategic location, favorable climate, membership in the dollar bloc and available natural resources—specially agricultural resources—will make it a prime area for traditional manufacturing and newer agro-industry investment directed to such new markets.

Since many sales opportunities here involve public procurement, a word about bidding procedures is in order. All Guatemalan Government purchases over $3000 are acquired through open bidding. The period in which bids may be filed, however, is often quite limited, occasionally precluding U.S. participation. Frequent contact with the Guatemalan market is thus a requisite for doing business here.

In sum, what is needed is foresight in investment planning and a selling job to stimulate import demand in an otherwise favorable business environment.

GUATEMALANS ASSEMBLE A U.S. PRODUCT—*Ovens are readied for shipment to Central American consumers. Guatemala's location is an incentive to investors.*

Pakistan Has Accomplished Much, But Formidable Problems Remain

During the past several months Pakistan's Government has registered impressive accomplishments in dealing with the staggering problems resulting from civil war, military defeat by India, and the loss of the East Wing—now Bangladesh. However, problems remaining to be resolved are formidable, according to the U.S. Embassy in Islamabad.

The economic situation has been characterized by an industrial recession, but a fairly good agricultural showing. The recession has reflected mainly lack of investor confidence and labor disputes and strife. In agriculture, a bumper cotton crop and expectations for another such crop have brightened the picture. The wheat harvest for the past season was reasonably good.

Trade still suspended

Direct trade between Pakistan and the former East Wing remains suspended. The mutual advantages of some resumption of direct trade relations appear obvious, but at least partial settlement of political differences is a prerequisite.

Government spokesmen have repeatedly stated that they remain committed to the goal of an equalitarian society involving land reform and improved labor, educational and health systems. However, after its early nationalization of the life insurance industry and its takeover of the management of 32 companies, the Government has moved with restraint, and its recent actions could hardly be described as radical. It has not offered compensation for the acreage expropriated under its land reform program, but the bulk of private land holdings have not been affected.

Despite the relatively moderate Government actions to date, the mood of the private sector and particularly of the industrial sector continues to be apprehensive. Industrial production has declined and little new private investment is under way or even contemplated. Exceptions to this trend are increased interest by the private sector in petroleum exploration, and in the expansion of tourist facilities by the Government.

On May 12, the Government changed the par value of the Pakistani rupee from Rs. 4.76 to Rs. 11 to the dollar and abolished the previously existing multiple exchange rate structure and the bonus system for certain exports. The effect on exports was to raise the average rupee proceeds per dollar by approximately 20 percent and by 30 percent for primary products, after allowing for export duties.

On the payments side, the effective rate for imports was increased on average by 40 percent, and for invisible payments, including debt service, by 117 percent. The average for all payments was increased by about 66 percent.

There has been a substantial increase in foreign exchange reserves. They have been hovering around $265 million, as compared with a low of $196 million in May 1971. Debt rescheduling agreements, new foreign economic assistance, and another good cotton crop are likely to continue to shore up the reserve position.

Devaluation should significantly increase foreign exchange receipts as Pakistani exports have proved to be highly elastic with regard to price.

Accompanying devaluation, the Government adopted a more liberal import policy by replacing the various categories of imports with a "free list" and a "tied list." Most imports, comprising more than 300 items, are on the former, while only some 25 items to be financed by aid and barter are on the latter.

In addition, certain commodities, such as coal, fertilizer, rail and track material, and electricity generating and transmission equipment, are reserved for public sector import only. Some luxury goods, perhaps the most important of which are private vehicles, continue to be banned.

Import liberalization should have only a limited effect on the balance of payments because of the substantial increase in the rupee cost of imports. However, elimination of the multiple exchange rates could significantly alter the composition of imports and should result in a more rational allocation of resources. For example, the previous low exhange rate for capital goods imports stimulated plant expansion despite very substantial non-utilization of existing plant capacity.

Dampened demand

The steep devaluation and lack of new private investment have dampened import demand. Heavy speculative import demand could emerge in the current uncertain atmosphere, forcing the Government to deplete reserves or reimpose import controls.

International currency realignments, plus Pakistan's linkage of its currency to the U.S. dollar (delinking from sterling), slightly improve prospects for more non-tied U.S. exports to Pakistan. Because of high freight rates and other factors, the U.S. price for many items still exceeds that of its competitors, however.

On May 26 the Pakistan Aid Consortium agreed in principle to extend debt relief to Pakistan of approximately $234 million for the period of May 1, 1971 to June 30, 1973. Separate agreements are being negotiated with each donor country.

On May 17 the International Monetary Fund approved a stand-

KARACHI SHIPYARD—*International currency realignments and linkage of Pakistan's currency to the U.S. dollar will help U.S. suppliers overcome high freight rates.*

by credit for Pakistan of Special Drawing Rights (SDR) 100 million ($108 million), to provide net relief, after taking account of repurchases due during the period of SDR 74 million ($80 million). A debt rescheduling agreement between the United States and Pakistan should be concluded in the near future. Subsequently, it is expected that the United States will extend Pakistan a loan to purchase certain commodities from the United States with a value of approximately $60 million.

Economic assistance

Likewise, as they conclude rescheduling agreements, other donor countries are extending new economic assistance to Pakistan, largely involving tied procurement from the specific country. However, the World Bank contemplates making a $50 million commodity loan to Pakistan in the near future.

The United States has agreed to supply 500,000 metric tons of wheat under a 1972 PL-480 Title I Agreement, and is in the process of negotiating a similar agreement for 600,000 metric tons. Taking into consideration usual marketing requirements of 100,000 metric tons, the gap which remains to be filled in FY 1973 will likely be around 500,000 metric tons.

Officials have stated that private foreign investments are welcome in Pakistan but that they are expected to contribute to the equalitarian social goals of the Government. Government's attitude toward the role of the private sector, domestic or foreign, remains ambiguous, however. Consequently, pending further clarifications, major private investment decisions are likely to be postponed.

The American Life Insurance Company, together with all other life insurance companies operating in Pakistan, is the only U.S. company in Pakistan which has been nationalized. Negotiations are currently under way which, hopefully, will result in reasonably prompt and adequate compensation.

Significantly, the Government appears to be carefully considering all consequences before proceeding with the implementation of a previously announced health scheme which could seriously affect the profitability of the private drug industry, in which U.S. companies have a substantial interest.

Some U.S. companies face serious problems as they have not been permitted to increase product prices despite significantly higher rupee costs following the devaluation, notably in fertilizer. Likewise, U.S. (and other) companies have not been permitted to discharge workers and have been compelled to grant large wage increases.

French Investment In Steel Industry Stays On Schedule

The French steel industry continues to go through a phase of major expansion and modernization. Producers are sticking to their ambitious investment programs at Dunkirk and Fos and hope to reinforce their position within the EEC.

Investments by French steel producers exceeded $600 million in 1971, about 60 percent more than the year before, and bigger investments are under way in 1972.

Of the total 1971 investment, the Usinor complex at Dunkirk and the Solmer complex at Fos represented, respectively, $260 and $55 million. Projections for investment expenditures by the French steel industry during the period of the sixth Economic Plan, 1971-1975, are around $5 billion.

The Solmer project has run into financial difficulties, in part because of a sharp drop in profits in 1971 at Wendel-Sidelor, the major shareholder. Efforts are being made to widen participation in the project.

Good sales possibilities

Possibilities for the sale of U.S. equipment are very good. Major U.S. firms are already important suppliers of the new steel mill expansion at Dunkirk, and the new Solmer complex at Fos. Also, much expansion is going on in older mills.

In a related field, that of foundries, press reports indicate that investments run to $70 million per year.

Aside from some of the larger companies, suppliers to the U.S. steel industry seem to be absent from the French market. Given the size of the French investment effort and the independent purchasing policy of French steel companies, American companies should make an effort to introduce their steel mill equipment and supplies to the French steel industry.

Bolivian Economy Reported Showing Encouraging Signs Of Improvement

Having enjoyed now more than a year of political stability, the Bolivan economy is showing encouraging signs of improvement.

Favorable indicators cited by the U.S. Embassy in La Paz include slightly higher prices for ore exports than in 1971, continued inflow of bilateral and multilateral assistance and increasing local private investment. Foreign investment could become significant again if the state petroleum corporation's hopes of signing exploration and development contracts with several interested foreign companies are realized. Special strength is seen in Santa Cruz petroleum and natural gas exports and in the same area's agricultural production.

Some tightening

Although unsupported estimates of the unemployment plus underemployment rate range as high as 50 percent of the work force, the unemployment rate probably has declined over the past year and pressures on wage and price levels seem to be increasing.

Money supply at the disposition of consumers has been rising at an annual rate of 21 percent during the past year, largely due to deficit financing of the government's budget by the Central Bank. Net Central Bank credit to the Government appears to be well on the way to exceeding the 350 million Bolivian peso level implicit in the government's revised 1972 budget. Even this level (nearly 19 percent of projected expenditures) would put considerable pressure on prices and demand for foreign exchange.

The unofficial "grey-market" rate is now over 15 pesos to the dollar (in contrast to the official exchange buying rate of 12.12 pesos to the dollar), apparently in response to the domestic deficit, to increasing de facto exchange controls and to cross-rates available in Chilean, Argentine, and Peruvian currencies. While the unofficial exchange market is not broad, it is one more indication that fiscal problems must be corrected soon.

Corrective action could dampen import demand at least temporarily. Business activity, within the Bolivian context, should continue brisk. Long-term exchange controls or increasing difficulties in obtaining foreign currencies to make payments abroad are not considered likely at this time.

The Bolivian Government is seeking bilateral and multilateral assistance loans on the order of US $250 million for infrastructure and industrial projects, both large and small. It is highly improbable that all of this amount will actually be disbursed (and thus available for purchasing) over the next few years, but in an economy the size of Bolivia's a substantial fraction of the above amount would have a very strong impact.

Commitments to invest

Known commitments by private Bolivians to invest total nearly $40 million and are expected to rise to about $60 million by the end of the year. This development, in a $1 billion GDP economy, is having a dramatically encouraging effect on the private sector in general.

Projects range from hotels to Christmas tree factories, bicycle and battery factories to tea bag plants; amounts to be invested range from $6 million for a hotel to $12,000 for a pilot plant to prefabricate housing. A fair portion of these funds are already being spent.

Foreign investors are beginning to show renewed interest in Bolivian opportunities, especially in petroleum and mining. It seems probable, however, that most of the foreign interest will take the form of operating and service contracts or of investments in mixed enterprises.

Renewed investment interest in Bolivia is a result of more than one year of political and social stability and growing evidence that the Bolivian Government is seriously interested in stimulating private investment. Among the accumulated evidence to date is a new Investment Law, which offers generous tax exemptions, and the new Hydrocarbons Law which spells out the basis upon which private firms may enter into operating and/or service contracts, in lieu of traditional concessions with the state petroleum enterprise, YPFB. Both laws explicitly state they apply equally to Bolivian and foreign firms.

The Government is also becoming more active in sending missions abroad to try to attract foreign private investment in the Bolivian economy.

Suppliers can sell more

Although Bolivia presently buys from the United States about 40 percent of its imports, which are expected to exceed $200 million in 1972, aggressive American suppliers of mining and petroleum machinery, agricultural and television equipment, pharmaceuticals, luxury foodstuffs and the complete range of consumers goods should be able to increase sales, despite strong competition from Japan, Germany, and increasingly Argentina, Brazil, and the Andean Pact countries.

Public sector spending, primarily in infrastructure, construction and tourism projects, offers selective but significant opportunities to U.S. suppliers.

Bolivian state enterprises continue to consider and make preliminary arrangements for some rather extensive investment programs for new mines, refineries, modernization of railroads, and country-wide extension of the television network—all, hopefully, to be financed by assistance from in-

ternational entities, foreign governments, and firms.

U.S. private investors, especially those willing to enter into mixed enterprises, should find the Bolivian business climate far more agreeable than at any time during the last three years and in many ways far more advantageous than in other member countries of the Andean Pact. Specific investment and export opportunities now exist within the Andean Pact of which Bolivia is a privileged member.

Manufacturing activities

Under the *Sectoral Program of Industrial Development for the Metal Working Industry,* Bolivia has been assigned certain manufacturing activities. Other member countries have committed themselves not to provide preferential credit treatment, tariff, tax or exchange rate incentives, other state assistance or encouragement to new investments in any of these activities until the end of 1987 in Colombia, Chile, and Peru and until 1982 in Ecuador.

The manufacturing activities assigned to Bolivia are: compressors (40 HP or over), pneumatic tools, threading tools, sinterized plates and rods, mechanical saws, three cone bits (without inserts) for oil well drilling, conical crushers, electrical switches (under 1,000 volts) and sealed absorption units.

Bolivia recognizes that, in the mining and petroleum industries, export receipts are most likely to grow from increased production which, in turn, will require additional and more efficient machinery. Priority projects identified in medium and small mining are expected to require more than $20 million in mining machinery and equipment.

COMIBOL, the state mining corporation, is discussing a loan of $13 million with the Inter-American Development Bank to use as exploration funds to pay for mining exploration machinery and technical help. The Ministry of Mining, in behalf of COMIBOL, is negotiating a $34 million loan from the World Bank to obtain mining machinery and equipment to mine the Mutun iron mineral deposit.

United Development Inc., based in Israel, signed a letter of intent with COMIBOL in which UDI would loan or arrange financing to COMIBOL up to $100 million. This sum would be used by COMIBOL to explore and develop the southwestern mineral zone of Bolivia and includes financing for mining machinery and working capital for mining operations.

Officials of YPFB, the state petroleum company, talk of expenditures on the order of $45 million for expanding refineries in Cochabamba and Santa Cruz, and $40 million for exploration and development of new fields. At least seven foreign oil companies thus far have expressed interest in beginning exploration and refining operations in Bolivia.

Optimism remains high

Although agriculture suffered a setback in 1972 mainly due to the vicissitudes of nature, optimism remains high. Cotton growers still expect to more than triple the $10 million cotton crop by 1975. Neighboring countries show no signs of decreasing their demand for Bolivian beef.

There appears to be a growing awareness of the need for and benefits to be derived from the application of the highest agricultural technology, including crop spraying, seed selection and treatment, crop rotation, and irrigation.

Other areas in which import demand should continue to grow include communications equipment, to meet pressures for better telephone communications and as a result of plans to make television service nationwide; food products and packaging, reflecting the increasing importance being given to agriculture and cattle raising; and aircraft and spares, in response to the reality that air transportation is the most efficient means of transport in much of Bolivia.

Japan Acts To Simplify Import Control Regulations

The Japanese Government has revised its import trade control regulations to simplify procedures and promote imports of commodities valued up to $1,000 ($2,000 for samples and advertising matter). Effective Sept. 1, the revision (1) raises from 72,000 yen ($233.33) to 308,000 yen ($1,000) the ceiling below which it is not necessary to obtain an import license from an authorized bank in order to import gifts and items for an individual's own use; (2) raises the comparable ceiling for samples and advertising items imported as gifts or not for sale from 360,000 yen ($1,169) to 616,000 yen ($2,000); and (3) reduces from nine to two—import license application and exchange remittance request—the number of documents required to be submitted to an authorized foreign exchange bank to obtain a license authorizing the importation of goods valued at less than $1,000.

These revisions apply only to items which have been "liberalized," that is, removed from the list of items which requires the advance import approval by the Ministry of International Trade and Industry.

Bigger Business Library Recently Opened In Seoul

The new, expanded Commercial Library of the U.S. Embassy in Seoul, located on the first floor of the Embassy Chancery, will be more accessible to businessmen and government officials. The Chancery is next door to Korea's Economic Planning Board and Ministry of Finance and across the street from the Unified Government Building, which houses the Ministry of Commerce and Industry.

Last year, U.S. exports to Korea (excluding military shipments) reached $582 million, up 14 percent over the 1970 figure, while U.S. imports from Korea were valued at $462 million, a gain of 25 percent.

International Business Reports

Reforming the Dollar: An International Monetary Policy for the United States. By C. Fred Bergsten. 95pp. $1.50. The Smithsonian Agreement and its Aftermath: Several Views. By Robert V. Roosa, O. Emminger, Robert Triffin and Gabriel Hauge. 80pp. $1.50. Published by the Council on Foreign Relations.

Both these publications could takes as their premise the opening sentences of C. Fred Bergsten's: "The international monetary system will be reformed. The present regime is unstable and cannot prevail for long. The issue which now faces the nations of the world is whether reform will be negotiated and rational, or result solely from the interplay of market forces and the uncoordinated exercise of national economic and political power. If the latter course prevails, new instabilities will result and the underlying problems which were evident long before the crises of 1971 will remain unsolved."

The authors are all in the category defined by Robert Roosa as those "engaged, however distantly, in the purposeful promotion of change in the international monetary system." Different though they are in tone, scope, focus and opinion, all the papers seek a better answer to what should be done next.

Write: Council on Foreign Relations, 58 East 68th St., New York, N.Y. 10021.

The Inter-American Development Bank: A Study in Development Financing. By Sidney Dell. 250pp. $15.

This study of the Bank discusses its structure and the resources at its disposal, and considers problems it has encountered (such as whether to back specific projects as opposed to overall plans) that are of concern to development planners. Also covers lending policies, the geographical distribution of funds, and ways of promoting regional cooperation.

Write: Praeger Publishers, 111 Fourth Ave., New York, N.Y. 10003.

Taschenbuch des Oeffentlichen Lebens, 1972. Edited by Dr. Albert Oeckl. In German. Bonn. 797pp. DM 36 (approximately $11).

The latest edition of this useful handbook lists the names and addresses of German Government agencies; associations of business, trade, and industry; social welfare and church associations; and institutes or groups concerned with education, research, the arts, publishing, radio, and television. The information has been compiled in cooperation with public organizations as well as with trade, cultural, religious, political, and other institutions. Included is a register of leaders in government, business and other fields within the Federal Republic and West Berlin. Reflecting rapid developments within Germany's social and political spheres is the addition of totally new sections or enlarged presentations of previous ones dealing with such topics as environmental protection, leisure-time organizations, associations concerned with the elderly, foundations, and consumer organizations.

Write: Festland Verlag GmbH, 53 Bonn, Postschliessfach 649, Federal Republic of Germany.

Businessman's Guide to the Centrally Planned Economy Countries. Modino Press, London. 188pp. $9.

An extensive listing of the names, addresses, telephone numbers, cable addresses and telex numbers of foreign trade agencies in Albania, Bulgaria, Mainland China, Cuba, Czechoslovakia, East Germany, Hungary, Poland, Romania, USSR and Yugoslavia.

Write: The Modino Press, Ltd., 6 Conduit St., London, W1R 9TG, England.

Calendar For World Traders

Nov. 1—New York—Input/Output Conference, Hotel Roosevelt, 9 a.m.-4 p.m. International topics include East-West Trade and multi-national firms. Sponsor: Commerce Field Office (212-264-0629).

Nov. 2-3—Clear Point, Ala. — Annual Alabama REEC meeting, Grand Hotel.

Nov. 6—New York—FCIB roundtable conference on international finance, credit and collection problems, Summit Hotel, noon.

Nov. 7 — Chicago — Automotive Club meeting, Builders Bldg.

Nov. 8—New York—FCIB Publishers Export Credit Group dinner meeting, Advertising Club, 4 p.m.

Nov. 13-15—New York—National Foreign Trade Convention. Waldorf-Astoria Hotel.

Nov. 14 — Chicago — International Trade Club of Chicago forum on Latin America, Palmer House.

Nov. 14-17—Scottsdale, Ariz.—Annual conference of world trade officers, Valley Ho Hotel. Sponsor: National Assn. of State Development Agencies, Washington.

Nov. 16—New York—Overseas Automotive Club luncheon and meeting, Summit Hotel, noon.

Nov. 17—Greenville, Miss.—International transportation seminar, Greenville Country Club. Sponsor: REEC.

Nov. 21 — Memphis — Memphis World Trade Club meeting, Sheraton Motor Inn.

Nov. 29 — Chattanooga — Export marketing conference, Read House, 9 a.m.-4 p.m. Sponsors: REEC, Atlanta Field Office.

Worldwide Business Services

International trade specialists in the Department of Commerce and Foreign Service Officers in the U.S. Embassies and Consulates around the world are continually developing specific commercial opportunities through which American companies can find buyers, agents, partners or investors overseas. One of the major means for communicating these opportunities promptly and accurately to the U.S. business community is through the columns of this magazine. The section that follows presents details about licensing and joint venture proposals, opportunities to sell to foreign firms and government agencies and appoint agents, details on major construction and expansion projects and notices of U.S. visits by foreign buyers.

Licensing, Investment Abroad

0910—SRI-LANKA (CEYLON)—Company seeks joint arrangement with U.S. firm for **fishing.** American company to provide trawlers; will have export rights. Established in 1966, deals in steel products, real estate and finance. Director of company, FINCO Ltd., is in the U.S. for 3-4 months. c/o Norman Weerasooria, 5808 Sonoma Rd., Bethesda, Md. 20034. P-72622.

1011, 1099—ARGENTINA—U.S. mining companies are offered full details of **mineralogical studies** covering 120,000 square kilometers in provinces of Salta and Jujuy, involving 34 prospects. Offer includes free access to sites for 120 days beginning Oct. 15, 1972. Studies were made by German and Argentine experts under a UN Special Fund. Mining companies interested in offer should provide name and firm's legal domicile, name of legal representative in Argentina, technical ability and some details of previous experience or mining speciality when requesting complete details from: General Juan Carlos Uriburn, President, Fabricaciones Militares (FM), Subdireccion de Desarrollo Minero, Departmento Geologia y Minas, Cabildo 65, 2°-Piso, Oficina 225, Buenos Aires. P-72604.

1511, 1611 — NIGERIA — In an official press release the Nigerian Government has announced approval of feasibility studies by the Netherlands Airport Consultants for **reconstruction and development of 18 airports.** The entire system will be equipped with navigational aids, including field lighting and communications links. The Government plans on entering into partnership with a few reputable international airport construction companies to execute the project and maintain the airfields for a given period. Construction firms interested in competing for the project should write the Nigerian Ministry of Transport, Lagos. P-72608.

2511—ARGENTINA—Manufacturer of **wooden household furniture** wants to expand. Seeks joint venture or other type of association with a U.S. company. Business established in 1946. Anselmo Ferraro, Pellegrini 414, Canada de Gomez, Provincia Santa Fe, Argentina. WTD. P-72621.

2600, 3551 — JAPAN — Firm seeks **new technology in paper making,** pollution free or controlled; production of synthetic paper. Also licenses to manufacture **food handling systems and components.** Interests include refrigeration storage, processing and packaging. Firm is a major equipment manufacturer. Reports annual sales of $186 million, employs about 12,000. Write Tohru Ochi, deputy general manager, Technical Development Dept., Sumitomo Shipbuilding & Machinery Co., Ltd., New Ohtemachi Bldg., 2-1 Ohtemachi 2-chome, Chiyoda-ku, Tokyo. WTD. P-72600.

2842—JAPAN—Manufacturing rights for **metal plating and related chemicals.** Will also consider importation of finished products. Firm presently produces metal surface cleaning, coating and plating chemicals. Claims about 10% of the market. Operates two plants; has ample financial resources for expansion. Write: Eiichi Inuzuka, president, or Masao Yamada, business planning room, Yuken Chemical Industry Co., Ltd., 50 Bawari, Noda-cho, Kariya-shi, Aichi Prefecture. WTD. P-72612.

3069—BRAZIL—Industrial rubber parts manufacturer seeks buyer. Firm produces cylinder linings, gaskets and seals, and molded rubber products. Customers include major companies. Dr. Oswaldo Balthazar Portella, Empresa Nacional de Artefactos de Borracha Ltda., Rua Buenos Aires, 70—5th Floor, 2000 Rio de Janeiro, GB—ZC-00, Brazil. WTD. P-72609.

3079, 2654—FRANCE—License to produce **cardboard and plastic packaging for food and dairy products.** Specializes in the manufacture of plastic containers for yogurt. Presently building new production facility. Write: Pierre Lemaire, assistant to manager, G. Fourlegnie & Fils, Blvd. de Montalembert, 59-Villeneuve d'Ascq, France. WTD. P-72613.

3079—SAUDI ARABIA—License to manufacture **fiberglass bathroom fixtures.** Particularly interested in production of complete modular bathrooms. Write: Mohammed Y. Al-Bedrawi, National Chemical Industries Ltd., P.O. Box 1312, Jidda. WTD. P-72605.

3141—BAHAMAS—The Ministry of Development has conducted a feasibility study for a **plastic footwear factory.** Interested American investors can review full details at the Ministry. Copies will not be mailed out. Economic/Commercial Sec., American Con. Gen., Adderly Bldg., Nassau. P-72620.

3433—ARGENTINA—License sought by large firm producing metalworking presses and liquefied gas containers to manufacture **residential hot water room heating equipment utilizing the thermotank principle.** Talleres Adabor S.A.I.C., E. Zeballos 1040, Bernal, Province of Buenos Aires. WTD. P-72601.

3559—GERMANY—Licenses to produce equipment for **molding plastic parts, other plastic processing machinery.** Firm specializes in production of textile machinery. Also makes plastic foil stretching machines, rotation vacuum embossing and laminating machines. Brueckner Maschinenbau, Gernot Brueckner, D-8221 Siegsdorf/Oberbayern, P.O.B. 100, Germany. WTD. P-72614.

3600 — JAPAN — Manufacturer of communication wire and cable products seeks licenses and know-how agreements in the following areas: **burglar protective devices for office and household use; heat-resistant, low cost, flexible printed circuits of plastic and wire connecting methods; electrical wire for use in circuitry of electronic computers, electronic instruments and wire connecting methods.** Proposals for joint ventures will be considered. Established in 1928; employs 500, with annual sales of $7.2 million. Write: Tsutomu Tsukamoto, president, Okano Electric Wire Co., Ltd., 754 Fukami, Ya-

Licensing and investment proposals from foreign firms are listed in these columns. Specific product interests in each proposal are highlighted in bold type to facilitate identification and each proposal is preceded by the appropriate four-digit product number taken from the Standard Industrial Classification (SIC) Manual.

Background information on opportunities abroad and assistance on overseas investments are available from the Office of International Investment, BIC-878, U.S. Department of Commerce, Washington, D.C. 20230. "P" numbers should be used when responding to specific proposals.

WTD indicates that a World Trade Directory Report containing financial and background information on the foreign firm is available for $2 from the Department of Commerce, BIC-924, Washington, D.C. 20230, or from any Commerce Field Office.

mato City, Kanagawa, Japan. WTD. P-72619.

3600—MALAYSIA—The Federal Industrial Development Authority (FIDA), a statutory body of the Malaysian Government, reports an increasing number of inquiries from U.S. and other foreign **electronics manufacturers concerning the establishment of manufacturing facilities in Malaysia.** FIDA has available full details of the Investment Incentives Act which provides tax relief for stipulated periods on projects approved before Jan. 31, 1973. It has also published a 12-page booklet, *"The Electronics Industry in Malaysia—Present Position and Future Prospects,"* of interest to potential investors. Write: The Director, Federal Industrial Development Auth., Wisma Damansara, P.O. Box 618, Kuala Lumpur. P-72606.

3621, 3679—FRANCE—Manufacture of electric and electronic industrial and power plant equipment seeks licensing rights for European production of **special purpose electric motors and electronic and commercial equipment.** Clemessy S.A., 13 rue de Pfastatt, 68 Mulhouse, France. WTD. P-72607.

3622—INDIA—Joint venture to manufacture **industrial controls such as motor starters, air break contactors, relays and flame proof push buttons and pilot lamps** proposed by producer of industrial controls and switchgear. Total project investment estimated at $1.2 million with equipment cost estimated at $450,000, of which $250,000 worth will have to be imported. U.S. partner asked to finance purchase of machinery and provide technical know-how in return for equity. Founded in 1965, firm is located at Okhla industrial complex and had turnover around $240,000 in 1971. Controls and Switchgear Co. (CASCO), 222 Okhla Industrial Estate, New Delhi. Attn: Ravinder Nath Khanna, partner. WTD. P-72603.

3622 — UNITED KINGDOM — Seeks license to expand existing range of **precision wire-wound resistors.** Required resistors should be synthetic resin encapsulated; .110" to .188" in diameter; .245" to .500" in length; .1 ohm and 1.2 megohms in value. Close tolerance and good stability (better than .01% pa) is important. Write: J. Z. Lang, Director, Elgar Laboratories, 23 Salisbury Grove, Mythchett, Camberley, Surrey, England. WTD. P-72611.

3642, 3694—THAILAND—Licensing or joint venture arrangement proposed by established firm to manufacture such **automobile parts as bulbs, headlamps, horns, horn relays, ignition parts and spark plugs.** Firm is experienced in the automotive business. Write: J. Goyoaga, manager—project development, Kamol Sukosol Co., Ltd., 857 Mahachai Rd., Bangkok. P-72602.

3670—SRI-LANKA (CEYLON)—Established metalworking firm with financial and real estate interests seeks contractual arrangements and know-how to custom-manufacture **electronic components such as computer boards, memory circuits, instrument panels and circuit boards.** Cites cheap labor and power as incentives and estimates $100,000 capital to cover microscopes and other special equipment requirements. Claims duty and tax free arrangements possible for import and export of necessary parts. Current sales reportedly exceed $1 million. FINCO Ltd., 49/16 Iceland Bldg., Colombo 3, Sri-Lanka (Ceylon). Norman E. Weerasooria, Jr., director, is temporarily residing 5808 Sonoma Rd., Bethesda, Md. 20034. P-72618.

3670—THAILAND—Infant electronic industry leader seeks technical know-how to manufacture **fluorescent read-out tubes for desk calculators.** Elcom Research Ltd., Sukhumvit Ave., Bangkok. Attn: Jonas Eddy, chairman, or Gowit Jira, president. WTD. P-72617.

3821 — GERMANY — Leading manufacturer of **testing equipment for paint, plastic and sheet metal industries** seeks licenses to make related products. Firm operates modern production facilities, can handle high precision work. Maintains active sales staff, agents throughout Europe. Ample resources available for expansion. Representatives of company plan to visit U.S. early in November. For further information write or call Office of International Investment, BIC-878, U.S. Department of Commerce, Washington, D.C. 20230, (202-967-3787). P-72615.

7392 — UNITED KINGDOM — An established management consulting firm with extensive experience in a number of industries throughout the world, including Eastern Europe, desires **contacts with U.S. companies considering overseas projects.** Particularly interested in technical and engineering firms. Offers package including feasibility studies, establishment of marketing and distribution channels, corporate planning, financing, etc. Sir Christopher Crossley, Parker DeLacey Cronk & Partners, 102-104, Hammersmith Rd., London, W.6. P-72616.

8931—ARGENTINA—Certified public accountant performing **auditing and business consulting services** seeks ties with U.S. firm in the same field. Sr. Juan Carlos Vega, Cerrito 1070, Piso 4°, Of. 74, Buenos Aines. WTD. P-72610.

Johannesburg Firm Offers Computerized Purchase Data

A Johannesburg firm, Tirandata, brings buyers and sellers together by computerizing supplier lists and matching them against the flow of telexed purchase orders coming in from 2,000 buyers. Tirandata circulates each buying order or tender to all listed suppliers of the commodity involved. After that, consummation of the transaction is up to the buyer and seller.

The 2,000 buyers Tirandata reportedly serves are said to include public corporations, municipalities, and many well-known private firms. These buyers pay no charge for Tirandata's service. Subscribing suppliers pay a monthly charge of between $67 and $100. Tirandata takes no cut of the turnover passing through the service.

The firm aims to have 1,000 supplier subscribers by the end of 1973. The firm is currently also negotiating a franchise in Sydney and plans to explore the European market soon.

Tirandata (Pty.) Limited is located at 506 Marlborough House, Eloff and Commissioner Sts., P.O. Box 1108, Johannesburg, South Africa; Telex 43155 South Africa.

Licensing In U.S.

For additional information on opportunities to manufacture foreign firm's products in the U.S., write Commerce's Office of International Investment, BIC-874, U.S. Department of Commerce, Washington, D.C. 20230 (202-967-2248), referring to the appropriate file number.

CANADA—Company of professional engineers is seeking a U.S. licensee to manufacture under license in the U.S. its composite floor system used in the construction industry. **File 2281**

NETHERLANDS — A medium-size subsidiary of a large oil company is interested in having its synthetic-resin based concrete finishing material and its line of modern decorative, protective plasters produced in the U.S. in joint venture with an American partner specializing in the production of dry cement, gypsum mortars, or the manufacture of paint. **File 2282**

SWITZERLAND—Company of engineering consultants is offering rights for exploitation in the U.S. of its novel process for the recovery of sugar alcohol xylitol from bagasse. **File 2283**

SWITZERLAND—A small organization specializing in biorythmic diagrams offers for manufacture under license in the U.S. its manual biorhythm computer. The computer is made of plastic materials and will position within seconds individual biorhythms. Such positioned readouts are reproduced by instant photography (Polaroid-Land system) on so-called "rhythmograms." **File 2284**

Japanese Retailer Seeking Quality U.S. Consumer Items

Matsushita Electric Trading Co., Ltd. is actively seeking a few American high quality consumer products to import in large quantities for retail sale in their 40,000 outlets throughout Japan. The firm is interested in products of high quality which will stand up well with use. The ability to supply high volume quantities is necessary. Matsushita is especially interested in purchasing domestic refrigerators with a capacity of 500 liters and over, manufactured by U.S. suppliers not having established distribution in Japan; refrigerators for vehicles, capacity 50 liters and under, capable of operating from 12-volt automotive electrical systems; compact size ice-cube making units; electric pet clippers, and other pet specialties. The firm requests catalogs and/or publications describing additional equipment for pets.

Also of interest to Matsushita are photographic equipment; electric can opener-knife sharpeners; card tables; power tools; sleds; costume jewelry; men's jewelry; sporting goods (especially ski and golf equipment and snowmobiles); hardware-store-type "gadgets"; automobile accessories; outboard motors; air purifiers for use in air conditioning ducts. Interested U.S. suppliers should write, sending catalogs and brochures, to Matsushita Electric Trading Co., Ltd., Attn: Naozo Shimomura, Man. Dir., 71 Kawaramachi 5-chome, Higashi-ku, Osaka. WTD 3/71.

Foreign Trade Opportunities

These trade opportunities are based on reports received from the U.S. Foreign Service by the Trade Opportunities Division, BIC-831, and units of the Bureau of Domestic Commerce (BDC), U.S. Department of Commerce, Washington, D.C. 20230. The commodities in which foreign firms have interest are indicated by the five-digit numbers and commodity classifications which are from the Standard Industrial Classification (SIC) Manual and the Numerical List of Manufactured Products, 1967 Census of Manufacturers, used extensively by Government and industry.

U. S. firms should be aware that the listing in Commerce Today *of opportunities to trade in specific commodities and technical data does not necessarily imply approval of their export by the Deparment of Commerce pursuant to the Export Administration Act of 1969. Applicable export licensing regulations must be followed.*

Every effort is made to include only firms or individuals with good reputations. However, the Department cannot be responsible for any trade relations.

The mark (•) indicates that this trade opportunity is a request for bids by a foreign government agency. A (★) at the end means that additional information may be borrowed by U.S. firms from the individual division of BDC. Abbreviations used are: I (importer); D (distributor); M (manufacturer); A (agent); R (retailer). To avoid delays, requests for loan material should specify the country, commodity and foreign government agency.

WTD indicates that a World Trade Directory Report containing financial and business background information on the foreign firm is available for $2 from the U.S. Department of Commerce, BIC-976, Washington, D.C. 20230.

Direct Sales

Specific foreign firms have expressed interest in direct purchases of the products below. See also the "Agencies" listing.

Field crop farms

01130—FRENCH WEST INDIES—Food grains for use in manufacture of animal feeds. Entrepots Du Pont-de-Chaines (M), P.O. Box 549, Fort-de-France, Martinque. WTD 9/72.

Meat products

20130 — ITALY — Sausages, other prepared meats. Sarda Provveditoria Marittima (I, D), Viale Diaz 73, 09100 Cagliari, Sardinia. Telex 79141; Cable Sapma Cagliari. WTD 10/72.

20138 — ITALY — Canned Meats. Sarda Provveditoria Marittima (I, D), Viale Diaz 73, 09100 Cagliari, Sardinia. Telex 79141; Cable: Sapma Cagliari. WTD 10/72.

Dairy products

20221—ITALY—Natural cheese. Sarda Provveditoria Marittima (I, D), Viale Diaz 73, 09100 Cagliari, Sardinia. Telex 79141; Cable Sapma Cagliari. WTD.

20230—FRENCH WEST INDIES—Condensed, evaporated milk products. Correspondent requested in French. Société R. E. C. Paulin (I, D, R), Route des Abymes, Pointe-à-Pitre, Guadeloupe. WTD in prep.

20230—SAUDI ARABIA—Frozen milk, canned or packaged for sale to consumers. Khalifa Al-GOSAIBI Cold Stores (D, A, R), P.O. Box 222, Dammam. WTD 6/72.

Canning, preserving foods

20330 — ITALY — Canned fruits, vegetables. Sarda Provveditoria Marittima (I, D), Viale Diaz 73, 09100 Cagliari, Sardinia. Telex 79141; Cable: Sapma Cagliari. WTD 10/72.

20331—ICELAND—Canned fruits of all descriptions, particularly peaches and pineapple. Landis (Eirikur Ketilsson) (I, A, D), Vatnsstigur 3, P.O. Box 1316, Reykjavik. WTD 8/72.

20334—ICELAND—Canned fruit juices of all kinds. Landis (Eirikur Ketilsson) (I, A, D), Vatnsstigur 3, P.O. Box 1316, Reykjavik. WTD 8/72.

20341 — GERMANY — Fruit powder derived from "Acerola" cherry to be used for manufacture of pharmaceutical, dietetic products. Twardy, Bernard J. (R, M), 2 Friedrich Ebert Str., 5038 Rodenkirchen. WTD 9/72.

Grain mill products

20411 — ITALY — Wheat flour. Sarda Provveditoria Marittima (I, D), Viale Diaz 73, 09100 Cagliari, Sardinia. Telex 79141; Cable: Sapma Cagliari. WTD 10/72.

20440—TOGO—Milled rice, approx. 200 bags monthly. Quotations c.i.f. Lome. Samples requested. Ets. Atlantic (I, D), 38, Ave. de la Libération, B.P. 2069, Lome. WTD in prep.

Sugar

20620 — FRENCH WEST INDIES — Refined cane sugar, byproducts. Correspondence requested in French. Société R. E. C. Paulin (I, D, R), Route des Abymes, Pointe-à-Pitre, Guadeloupe. WTD in prep.

Beverage industries

20853—ITALY—Bottled liquors. Sarda Provveditoria Marittima (I, D), Viale Diaz 73, 09100 Cagliari, Sardinia. Telex 79141; Cable: Sapma Cagliari. WTD 10/72.

20853—GERMANY — Bottled American whiskey; delivery for pre-Christmas sale. J. Muellhoff, Attn: Jost Fuhrmann (I, D, M), 418 Goch, Suedring. WTD in prep.

20860—ITALY—Bottled and canned soft drinks. Sarda Provveditoria Marittima (I, D), Viale Diaz 73, 09100 Cagliari, Sardinia. Telex 79141; Cable: Sapma Cagliari. WTD 10/72.

Cigarettes

21110—ITALY—Cigarettes. Sarda Provveditoria Marittima (I, D), Viale Diaz 73, 09100 Cagliari, Sardinia. Telex 79141; Cable: Sapma Cagliari. WTD 10/72.

Manmade fiber, silk

22218—GERMANY — Manmade fiber to be sold to spinning mills and textile finishers. c.i.f. Bremen or Hamburg. Firma Heinrich von Hoesslin Jr. (I, D, A), D-867 Hof/Saale, Westendstrasse 1. WTD 1/72.

Knitting mills, products

22531—GERMANY—Sweaters for children, boys, girls; all sizes. Prices c.i.f. or f.o.b. Hadeka Handelszentrale Deutscher Kaufhaeuser Egmbh., Attn: Herr Finkernagel (D, I), 102-104 Theodor Heuss Allee, 6000 Frankfurt/Main. WTD in prep.

22540 — GERMANY — Knit underwear, men's, women's, children. Prices c.i.f. or f.o.b. Hadeka Handelszentrale Deutscher Kaufhaeuser Egmbh. Attn: Herr Finkernagel (D, I), 102-104 Theodor Heuss Allee, 6000 Frankfurt/Main. WTD in prep.

Floor covering mills, products

22710 — FRANCE — Floor coverings of woven textile fiber. EGECOR, S.A. (M, D), 9, Rue Beauregard, 25000 Besancon. WTD in prep.

22710 — NORWAY — Floor coverings, woven textile fiber. A/S Four-Color (I, purchasing organization), Mollergaten 28, Oslo 1. WTD 9/72.

22720 — NORWAY — Floor coverings, tufted. A/S Four-Color (I, purchasing organization), Mollergaten 28, Oslo 1. WTD 9/72.

22790 — FRANCE — Floor coverings of jute, sisal, etc. EGECOR, S.A. (M, D), 9, Rue Beauregard, 25000 Besancon. WTD in prep.

Women's, misses', juniors' outerwear

23352—GERMANY—Women's and juniors dresses, in medium price range. Prices c.i.f. or f.o.b. Hadeka Handelszentrale Deutscher Kaufhaeuser Egmbh., Attn: Herr Finkernagel (D, I), 102-104 Theodor Heuss Allee, 6000 Frankfurt/Main. WTD in prep.

Fabricated textile products

23940—BELGIUM—Camping tents. Direct purchase & agency. Marchal Et Biron R. (I, A), 211 Rue St. Eloi, Waremme. WTD in prep.

Sawmills, planing mills

24211 — NEW ZEALAND — Lumber, namely cedar, redwood, douglas fir required for own stock and for resale to lumber merchants. Company seeks sole representation only for U.S. lumber company. Carter Merchants Ltd., Attn: M. S. Martin, Merchandising Executive (I, D, M), P.O. Box 8532, Symonds St., Auckland 1. WTD in prep.

24212 — CANADA — Redwood siding. Evergreen Distributors, Div. of Independent Retail Lumber Yards (IRLY Birds) Ltd., Attn: L. Bowman, Gen. Mgr. (I, D), 7846-128th St., P.O. Box 9010 Surrey, B.C. WTD 9/72.

24212—ITALY—Milled logs, boards, veneersleaf and flitches particularly of douglas fir, hemlock, pitch pine, yellow pine, spruce, hickory, oak, red gum, sap gum, red elm, and black walnut. Marco Basso E. Figli (I, D), Via Garibaldi 142, 13045 Gattinara Vercelli. WTD 5/72.

24212—ITALY—Pitch pine and douglas fir for home building. Geom Luigi Delpiano, Industria del Legno (I, D), 13030 Caresanablot, Vercelli. WTD 4/72.

Converted paper, paperboard items

26440—FRANCE—All kind of wallpaper. EGECOR, S.A. (M, D), 9, Rue Beauregard, 25000 Besancon. WTD in prep.

26440 — NORWAY — Wallpaper, other wall coverings. A/S Four-Color (I, purchasing organization), Mollergaten 28, Oslo 1. WTD 9/72.

26451 — SWITZERLAND — Magnetic cards for card operated access control systems, of standard credit card size. Zuhlke Engineering AG, Attn: Mr. Weiersmuller (M, consulting engineers), Badenerstr. 80, CH-8952 Schlieren. WTD in prep.

26495—NIGERIA—Business machine paper supplies including cards and paper for data processing and accounting machines. Prudential Office Products (I, D, R), 30 Cemetery St., Ebute Metta, Lagos. WTD in prep.

Books

27311—GERMANY—Teaching aids: children's educational games (reading, language, calculating) for pre-school age, elementary and secondary schools; intelligence testing material. German language material preferred. TURM-Verlag Steufgen & Sohn, Attn: Mr. Steufgen (D, M), 4 Duesseldorf, Schloss-Str. 18. WTD 8/72.

Greeting card manufacturing

27711—BELGIUM — Humorous greeting cards without printed text and without envelopes; text will be printed in Belgium. Cards not to be folded. Requests samples. Editions J. Corna (I, D, exporter), 106 Rue Berthelot, 1060, Brussels. WTD in prep.

Industrial chemicals

28183 — ITALY — Anethol USP 21/22 (centigrade) in 200 kg drums; vanillin USP in 50 kg fiber drums for production of perfume essences. Giuseppe Bruno (I, M), Via La Farina Isolato R 98100 Messina. WTD 10/72.

Synthetic materials

28215—ICELAND—Anaerobic type resins for industrial adhesives. Kisill H.F.—Silicone Products Co. (I, A, D), 6B Laekjargata, Reykjavik. WTD in prep.

28219 — ITALY — Vinyl butral safety glass interlayers for use primarily to manufacture safety glass. Compagnie Saint Gobain Pont-a-Mousson (I, M), Mr. Luigi Picheo, Mgr., Via Romagnoli 6, 20146 Milan. WTD in prep.

Drugs

28311—MEXICO—20 metric tons soluble dehydrated (by spray-dryer method) blood, with following analysis: 90 percent minimum protein, 6 percent maximum moisture; and with following microbiologic analysis: total count less than 30,000 colonies per gram: coliforms, fungi, yeasts, and salmonella all negative; for animal use. f.o.b. El Paso, Tex. Bioquimica Integral Mexicana, S.A. (D, M), Blvd. Lopez Mateos 903 Ote., Celaya, GTO. WTD in prep.

28313—MEXICO—250 metric tons dried milk serum, according to following analysis: 12 percent minimum protein, 65 percent lactose, 12 percent maximum ash, 0.5 percent fat, 6 percent moisture, 5 percent maximum acidity (expressed as lactic acid); and according to following microbiologic analysis: total count less than 30,000 colonies per gram: coliforms, fungi, yeasts, and salmonella all negative; for animal use. Bioquimica Integral Mexicana, S.A. (D, M), Blvd. Lopez Mateos 903 Ote., Celaya, GTO. WTD in prep.

Cleaning preparations, cosmetics

28423—ICELAND—Commercial and industrial cleaning, sanitation compounds. Kisill H.F.—Silicone Products Co. (I, A, D), Laekjargata 6B, Reykjavik. WTD in prep.

28445—TOGO—Cosmetics; in large quantities if prices competitive. Quotations c.i.f. Lome. Ets. Atlantic (I, D), 38, Ave. de la Libération, B.P. 2069, Lome. WTD in prep.

Paints, varnishes, lacquers, enamels

28518—SWITZERLAND—Putty, industrial, construction caulking compounds, newly invented products. Exclusive sales rights. Furter & Co. (I, D), Schwamendingenstr. 98, CH-8036 Zurich. WTD 9/72.

Petroleum refining

29110—GERMANY—Liquid paraffin with carbon distribution within tolerance of C 14 to C 17, free from flavors, sulphur and metals, materials of clean cut. Monthly quantity 1,000 tons. Possehl Chemie und Isolierstoffe GmbH. Attn: Mr. Reisen (I, D. M), 2 Hamburg 36, Colonnaden 72. WTD 4/72.

Fabricated rubber products

30698 — SWITZERLAND — Protective rubber clothing, rubber coated fabrics, technical rubber novelties, requests offers from manufacturers only. Exclusive sales rights. Furter & Co. (I, D), Schwamendingerstr. 98, CH-8036 Zürich. WTD 9/72.

Plastic products

30795 — SWITZERLAND — Plastic bearings, novelty industrial plastic products. Requests offers from manufacturers only. Exclusive sales rights. Furter & Co. (I, D), Schwamendingerstr. 98, CH-8036 Zurich. WTD 9/72.

30796 — SWITZERLAND — Construction plastics products, plastic gas plumbing fixtures, bathroom accessories, plastic baseboards. Exclusive sales rights. Furter & Co. (I, D), Schwamendingerstr. 98, CH-8036 Zurich. WTD 9/72.

Footwear, except rubber

31412 — SWITZERLAND — Personal industrial safety work shoes for men. Exslusive sales rights. Furter & Co. (I, D), Schwamendingenstr. 98, CH-8036 Zurich. WTD 9/72.

Structural clay products

32530 — NORWAY — Ceramic floor and wall tiles. A/S Four-Color (I, purchasing organization), Mollergaten 28, Oslo 1. WTD 9/72.

Steel mill products

33123—BOLIVIA—Tin plate for use in fabrication of tin cans. Correspondence requested in Spanish. Gabriel Dabdoub y Cia. (I, R, exporter), Casilla 15, Santa Cruz. WTD 6/72.

33123—ISRAEL—Hot-rolled steel coils of up to 25 tons each; width: from 27½ to 71 in.; thickness range: between 0.11 and 0.36 in.; quality: according to AISI standard nos. between 1010 to 1016, also according to API 5 lx 46 and 52—for manufacture of steel pipes for water, oil and gas. Quantity: up to 10,000 tons per shipment initially. Quotations c.i.f. Haifa, if possible. Middle East Tube Co. Ltd. (M), P.O. Box 788, Haifa; Atten: Mr. Wolf, Import/Export Mgr. WTD 12/71.

33123—MALAYSIA—Hot-rolled steel in coils; approximately 50 long tons per shipment, c.i.f. Port Klang. Pillar Naco (Malaysia) Sdn. Bhd. (M), No. 5 Section 13, Jalan Bersatu, P.O. Box PJ 215, Petaling Jaya. WTD in prep.

33124—ITALY—Hot rolled steel plates. Direct purchase & agency. RTI Rappresentanze Techniche Internazionali (I, A, D), Via Duchessa Jolanda 9, 10138 Torino. WTD in prep.

33127—ITALY—Cold rolled steel sheet and strip produced from own hot rolled material in steel mills. Direct purchase & agency. RTI Rappresentanze Techniche Internazionali (I, A, D), Via Duchessa Jolanda 9, 10138 Torino. WTD in prep.

33167—ITALY—Cold rolled steel sheet and strip not made in steel mill. Direct purchase & agency. RTI Rappresentanze Techniche Internazionali (I, A, D), Via Duchessa Jolanda 9, 10138 Torino. WTD in prep.

33176—CANADA — Steel tubing: drawn over mandrel (dom), sae c-1026, 70,000 psi minimum yield strength; 80,000 psi minimum tensile strength. Canadian Trailmobile Ltd., Atten: Bill Mason (M), 100 Shaver St., Brantford, Ontario. WTD in prep.

Rolling, drawing, extruding of nonferrous metals

● 33500 — INDIA — Directorate General of Supplies and Disposals, Parliament St. New Delhi, India invites bids for: a) 1,000 km. composite cable containing 4 coaxial cores of type 375 three paper/polythene insulated star quads and 8VF pairs lead sheathed and polythene jacketed. b) 2,200 sits ferrules for jointing coaxial cores including special protective pastes/components tapes for joints, suitable for cable mentioned under a. c) 550 cable terminal boxes including all assembly piece parts with male equipment

plugs (2 boxes per repeater). d) 25 sets special tools for joining coaxial cores. Tender No. ES-9/202/39/056/CELL-550 Bid deadline December 8. Copies of specifications available for $2.75 at the India Supply Mission 2536 Mass. Avenue N.W., Washington, D.C., 20008.

33510—CANADA—Copper water piping; various sizes. Evergreen Distributors, Div. of Independent Retail Lumber Yards (IRLY Birds) Ltd. Atten: L. Bowman, Gen. Mgr. (I, D), 7846 - 128th St., P.O. Box 9010, Surrey, B.C. WTD 9/72.

Nonferrous foundries

33610 — ITALY — Aluminum and aluminum base alloy castings. Mondial Piston Spa (D, M), Corso Bramante 47, 10126 Torino. WTD 5/72.

Primary metal industries

33920 — ITALY — Magnesium and magnesium base light alloys titanium and titanium base light alloys for metallurgical applications. Mondial Piston Spa (D, M), Corso Bramante 47, 10126 Torino. WTD 5/72.

Heating apparatus, plumbing fixtures

34310—CANADA—Stainless steel sinks. Evergreen Distributors, Div. of Independent Retail Lumber Yards (IRLY Birds) Ltd., Atten: L. Bowman, Gen. Mgr. (I, D), 7846 - 128th St., P.O. Box 9010, Surrey, B.C. WTD 9/72.

Fabricated structural metal products

34437—AUSTRALIA—Storage tanks for peanut industry. Mr. C. W. Brockway, Animal Industry & Agriculture Branch, Darwin Northern Territory 5790.

Farm machinery

35225 — AUSTRALIA — Harvesting machinery for peanut industry. Mr. C. W. Brockway, Animal Industry & Agriculture Branch, Darwin Northern Territory 5790.

35228 — ARGENTINA — Poultry manure drying machinery. Requests literature, price lists. Benito Pernicone S.A. (farming), Av. R.S. Pena 150, Arrecifes, Provincia de Buenos Aires. WTD in prep.

35228 — AUSTRALIA — Cultivators for peanut industry. Mr. C. W. Brockway, Animal Industry & Agriculture Branch, Darwin Northern Territory 5790.

35228 — ITALY — Advanced farm machines for growing iceberg lettuce (smallest size available—about 100 acres now under cultivation). Vomano (S, R), Atten: Rag. Franco de Nigris (farming consortium), Via Nazionale Sud 4, Roseto Degli Abruzzi (Teramo). WTD in prep.

35228—MALAYSIA—Rice driers. Catalogs, descriptive materials requested. National Padi & Rice Authority (government sponsored agency), UMBC Bldg. 20th floor, Kuala Lumpur. Atten: Cik Khatijah Ahmad, Dir. of Adm.

Construction, mining, materials handling machinery, equipment

35314 — PORTUGAL — Two second-hand mobile power cranes mounted on diesel driven trucks of respectively 90 tons with 200 ft. boom and 60 tons with 140 ft. boom minimum length and gib included. Requests specifications, quotations c.i.f. Lisbon. Construções Metalomecânicas MAGUE SARL (I), Alverca do Ribatejo. WTD in prep.

35316 — JAMAICA — Concrete engine-driven power trowels and vibrators. Brochures, quotations c.i.f. Kingston. Universal Engineering Co., Ltd. (I, D, M), 1 Connolley Ave., Kingston 4. WTD in prep.

35318—ITALY—Large size off highway trailers and wagons; heavy duty crawler tractor cranes. Minimum carrying capacity 100 metric tons. Direct purchase & agency. Grumac di Bruno Della Lotta (A, D), Corso Unione Sovietica 385, 10135 Torino. WTD 12/72.

35318 — JAMAICA — Diesel driven road rollers; engine driven plate-type soil compactors. Brochures, quotations c.i.f. Kingston. Universal Engineering Co. Ltd. (I, D, M), 1 Connolley Ave., Kingston 4. WTD in prep.

35340—MOROCCO—Airport equipment: elevators (6 x 15 passenger units); freight lifts (2 x 600 kg units); hospital type lift (one); escalators (3 double units of approx. 12 meters ea. unit). Correspondence requested in French. Requests ASAP brochures, specifications, catalogs, current prices, alternative models. Mourad Ben Embarek (architect & consulting engineer), Imm. Bnde, 13 Rue Ibn Al Forat, Rabat. WTD in prep.

35351—MOROCCO—Passenger telescopic gangway for servicing airplanes (5 units); passenger baggage belt loader (4 units of 35 meters each); baggage carousel (5 units); rolling sidewalks (about 200 meters). Correspondence requested in French. Requests ASAP brochures, specifications, catalogs, current prices, alternative models. Mourad Ben Embarek (architect & consulting engineer), Imm. Bnde, 13 Rue Ibn Al Forat, Rabat. WTD in prep.

35361—JAMAICA — Portable diesel engine-driven building hoists. Brochures, quotations c.i.f. Kingston. Universal Engineering Co. Ltd. (I, D, M), 1 Connolley Ave., Kingston 4. WTD in prep.

35370—JAMAICA — Diesel engine type fork lift trucks. Brochures, quotations c.i.f. Kingston requested. Universal Engineering Co. Ltd. (I, D, M), 1 Connolley Ave., Kingston 4. WTD in prep.

Metalworking machinery

35410—ALGERIA—Turnkey (except civil engineering construction) of factory for manufacture of household closed hot water radiators. Correspondence in French. Societe Batneene de Constructions Metalliques (M), Zone Industrielle Batna, B.P. 52, Batna. WTD in prep.

35420 — CZECHOSLOVAKIA — Special press for manufacturing cage which holds roller bearings. Hard currency allotment available for purchase which must be completed calendar 1972. Research Institue of Metal Industry, Presov, Ing. Milan Bajer, Sidlisko III.

Special industry machinery

● **35500 — ALGERIA** — Turnkey plastic cover sheet plant to be built at El-Asnam. Correspondence in French required. Tender No. not specified; bid deadline Dec. 18, 1972. M. Le Chef Du Projet Plastiques, Sonatrach, 17 Rue De La Liberte, Algiers. Tender documents available at above address for DA 1500.

35511 — CZECHOSLOVAKIA — Equipment for production and packaging of ice cream, capacity 8 million liters (9 million quarts) annually, in containers ranging from individual portion to family packing sizes. Hard currency allotment available for purchases which must be completed in calendar 1972. Mliekarensky Priemysel ("Dairy Industry") (M), Mr. Alexander Szabo, Sectoral Management, Mileticova 11/A, Bratislava.

35520 — GUATEMALA — Automatic screen printing finishing plant for synthetic textiles, medium size; about US$150,000. Catalogs, quotations requested. Lacetex, S.A. (D, M), 9A. Calle 6-62, Zona 1, Guatemala City. WTD 72.

35552—ITALY—Electrical and mechanical parts, attachments for printing trades machinery and equipment. Rotomec SpA. (I, D, M), Strada Casale Asti Km 5, 15020 San Giorgio Monferrato Alessandria. WTD 4/72.

35521—BOLIVIA—Complete equipment and machinery for manufacture of cotton thread; capacity 2,000 spindles, expandable to 5,000. Correspondence requested in Spanish. Gabriel Dabdoub y Cia (I, R, exporter), Casilla 15, Santa Cruz. WTD 6/72.

35531—ARGENTINA — Furniture makers' machinery, woodworking machinery. Requests literature, price lists. Anselmo Ferraro (D, M), Pellegrini 414, Canada de Gomez, Provincia de Santa Fe. WTD in prep.

35531—CANADA—Machinery to manufacture fire place logs. Truax Bros. Ltd., Attn: Craig Truax (M), 39 Oak Street West, Leamington, Ontario. WTD in prep.

35551—ISRAEL—Printing supplies, including ink, plates, film, other items. Direct purchase & agency. The Jerusalem Post (publishing, printing), P.O. Box 81, Romema, Jerusalem. WTD in prep.

● **35595 — TURKEY** — Construction of bottle and container factories in Mersin. Combined project for producing flat glass and bottles and industrial glass containers. Factories will have annual production of 50,000 and 80,000 tons respectively. Equipment required: one complete line H-24 glassware production or equivalent; one complete feeder mechanism for above; one complete set of cold cutting or finishing apparatus; one complete set of grinding, polishing and washing equipment for above items. Interested firms should send f.o.b. and c.i.f. price quotations with full specifications and delivery dates to: Gen. Mgr. of ACS (Anadolu Cam Sanayii A.S.) Uray Caddesi 134, Mersin.

General industrial machinery

35612 — ARGENTINA — Electric turbine submersible pumps. Descriptive literature, price lists requested. Alois M. Steverlynck—Quinta "Aloma" (Farming), Ruta Nacional 7, Km. 76.5, Cortines, WTD in prep.

35690—ICELAND — Single machine for filling and closing plastic tubes. Low price and low output for very limited market. Kisill H.F. — Silicone Products Co. (I, A, D), 6B Laekjargata, Reykjavik. WTD in prep.

35690—ITALY—Machinery to wrap automatically 30,000 heads iceberg lettuce daily (during eight-hr. shift) with transparent perforated plastic film. Requests quotations, technical data as well as information on source, price of plastic

wrapping material. Vomano S.R.L., Attn: Rag. Franco de Nigris (farming consortium), Via Nazionale Sud 4, Roseto degli Abruzzi (Teramo). WTD in prep.

35690—NIGERIA—Machine to form, fill and seal collapsible clear plastic container of approximately 6 in. by 1¾ in. for flavored "ice pops." Onosiem Technology Nigeria, Ltd. 109 Kirikiri Rd., Olodi, Apapa. WTD in prep.

Service industry machines

35851—BOLIVIA—Household air conditioners. Requests catalogs, descriptive materials. Correspondence in Spanish. Gabriel Dabdoub y Cia. (I, R, exporter), Casilla 15, Santa Cruz. WTD 6/72.

35855—NORWAY — Complete air-cooled condensing units (open type compressors) for commercial refrigerators to be supplied without motors; capacity 250 K/Cal. upwards; urgently needed for fitting in ships. A/S Edco, Fred. (I, D), Olsensgate 1, Oslo 1. WTD 12/71.

35892—ICELAND — Commercial and industrial cleaning equipment. Kisill H.F.—Silicone Products Co. (I, A, D), 6B Laekjargata, Reykjavik. WTD in prep.

Electrical industrial apparatus

36213—ITALY—Diesel motor parts for land transportation equipment. Direct purchase & agency. Mondial Piston, Spa (D, M), Corso Bramante 47, 10126 Torino. WTD 5/72.

36442 — AUSTRIA — Shrink tubes and cable components of cross-linked polyolefins or similar plastic materials for use as cable sleeves and cable heads. Estimated annual requirements about US$40,000. Technical specifications, price quotations requested. IFK Handels—Ges. m.b.H. & Co. K. G. (I, A, D), Berg 67, A-5028, Salzburg. WTD in prep.

Radio, television receiving sets

36514—ITALY—Recorders, record players, other home type electronic equipment except television and radio sets. Direct purchase & agency. Hirtel, Costruzioni Elettroniche (I, M), Corso Francia 30, 10143 Torino. WTD 9/72.

36515—ITALY—Public address systems, loudspeakers, tuners, amplifiers, home type electronic kits, other audio equipment. Direct purchase & agency. Hirtel, Costruzioni Elettroniche (I, M), Corso Francia 30, 10143 Torino. WTD 9/72.

Communication equipment

36620 — GERMANY — Microwave products. Payment within two weeks; 3% trade discount. Gustav Beck KG (I, D, A), 85 Nuernberg 5 (POB 150 280), Praterstrasse 32. WTD 11/71.

36620—MOROCCO—Airport equipment: air traffic control board, electronic (8 x 3 language units), all electric equipment for 50 cycles. Correspondence requested in French. Requests ASAP brochures, specifications, catalogs, current prices, alternative models. Mourad Ben Embarek (architect & consulting engineer), Imm. Bnde, 13 Rue Ibn Al Forat, Rabat. WTD in prep.

Electronic components, accessories

36740—GERMANY—Transistors, diodes, rectifiers, thyristors, triacs. Payment within two weeks; 3% trade discount. Gustav Beck KG (I, D, A), 85 Nuernberg 5 (POB 150 280), Praterstrasse 32. WTD 11/71.

36741 — ITALY — Miniature linear integrated microcircuits for hearing aids and computers; particularly TTL, DTL, MOS. Brio Micro Elettronica (I, M, D), Via Pacchiardo 10040 Valdellatorre, Torino. WTD 5/72.

36790—GERMANY—Integrated circuits; opto-electronic components. Payment within two weeks; 3% trade discount. Gustav Beck KG (I, D, A), 85 Nuernberg 5 (POB 150 280), Praterstrasse 32. WTD 11/71.

36792 — ITALY — Capacitors for electronic applications. Hirtel, Costruzioni Elettroniche (I, M), Corso Francia 30, 10143 Torino. WTD 9/72.

36793—ITALY—Resistors for electronic applications. Direct purchase & agency. Hirtel, Costruzioni Elettroniche (I, M), Corso Francia 30, 10143 Torino. WTD 9/72.

36795—ITALY—Airpax type 203 circuit protectors. Direct purchase & agency. Hirtel, Costruzioni Elettroniche (I, M), Corso Francia 30, 10143 Torino. WTD 9/72.

Electrical machinery, supplies

36930—SPAIN—Electromedical and electrotherapeutic apparatus, electroencephalographs, electrocardiographs, ultrasonic diagnostic items. Medical Europa, SA, Attn: Jose Maria Cabane (R, I, D), Via Augusta, 158, Barcelona 6. WTD 5/72.

36992—IVORY COAST—Lamps and apparatus that kill insects without chemicals. Correspondence requested in French. Pierre Jean Benec, Directeur Commercial (I, D, R), CODIF, Boîte Postale 2678, Abidjan. WTD in prep.

Motor vehicles, equipment

37112—ITALY—Large crane truck; minimum carrying capacity 100 m.t. Direct purchase & agency. Grumac di Bruno Della Latta (A, D), Corso Unione Sovietica 385, 10135 Torino. WTD in prep.

37141—ITALY—Parts, accessories for motor vehicle gasoline engines, direct purchase & agency. Mondial Piston, Spa (M, D), Corso Bramante 47, 10126 Torino, WTD 5/72.

Ship building, repairing

37313—BELGIUM—Yachts, spare parts therefor. Direct purchase & agency. Herman Van Bouchout (I, A, D), Bondgenotenlaan 68, 30000 Leuven. WTD in prep.

37313 — URUGUAY — Fishing vessels, high sea trawlers and factory, up to 10,000 gt, new and/or used, and fishing equipment. Corporacion Privada de Fomento S.A. (mfr.), Juan Carlos Gomez 1348, Of. 302, Montevideo. WTD in prep.

Transportation equipment

37991—BELGIUM—Camping and travel trailers, complete units. Direct purchase & agency. Marchal Et Biron R. (I, A), 211 Rue St. Eloi, Waremme. WTD in prep.

Laboratory, scientific instruments

38112—FRANCE—Laboratory, scientific instruments. Direct purchase & agency. SOPOLEM (I, M), 102, Rue Captal, 92300 Levallois-Perret. WTD in prep.

38112 — KOREA — Physical-chemical instrument to create high pressure (100,000 atmosphere) and high temperature (3,000 degree k or over). Requests catalogs, prices. Kyung Hee University, Dept. of Chemistry, Attn: Prof. Hyun-Chae Jung. 1 Hoikee-dong, Dong Daemun 2 ku, Seoul 131.

38112—SPAIN—Laboratory centrifuges and calorimeters. Medical Europa, S.A., Attn: Jose Maria Cabane R. (I, D), Via Augusta 158, Barcelona 6. WTD 5/72.

Instruments for measuring, indicating, controlling, physical characteristics

38210 — CZECHOSLOVAKIA — Continuous measuring equipment for dust emmissions from chimneys of cement works, Regional Center of Hygiene, Pilsen, Ing. Jiri Kupilik, Cechova 15, Pilsen.

Surgical, medical, dental items

38421—ISRAEL—Wheel chairs for traffic casualities. Requirement: 30 to 40 units per yr. A.N.T. Israel Assoc. for Traffic Accident Casualties (Voluntary, nonprofit organization), 34 Itzhak Sadeh St., P.O. Box 20148, Tel Aviv; Attn: Moshe Shahar, Hon. Secretary.

38423 — SWITZERLAND — Personal industrial safety devices, all types of respiratory protection masks, eye, face protection devices, shields, hoods, protective work clothing, first aid kits, ear protectors, muffs, novelties, disposables. Requests offers from manufacturers only. Exclusive sales rights. Furter & Co. (I, D), Schwamendingerstr. 98, CH-8036 Zürich. WTD 9/72.

Ophthalmic goods

38513 — SWITZERLAND — Industrial goggles, eye protectors, welding circles, plates, disposables, novelties. Exclusive sales rights. Furter & Co. (I, D), Schwamendingerstr. 98, CH-8036 Zürich. WTD 9/72.

Musical instruments, parts

39314—BELGIUM—All kinds of wooden and metal wind instruments, band instruments; percussion instruments; guitars; accessories. Correspondence preferably in French. Catalogs, descriptive materials, price lists requested. Direct purchase & agency. Inter Music SA (I, D), Rue Bodeghem 37 1000 Brussels. WTD in prep.

Manufacturing industries

39961 — NORWAY — Floor coverings (linoleum). A/S Four-Color (I, purch. org.), Mollergaten 28 Oslo 1. WTD 9/72.

39962—FRANCE—Floor coverings (linoleum), EGECOR, S.A. (M, D), 9, Rue Beauregard, 25000 Besancon. WTD in prep.

Wholesalers

50930—FRANCE—Textile waste: nylon strips, at least 6 ft. long, to be used for agriculture bindings, any color. Must be very resistant. Societe Jacques Fleury (I, exporter), 48, rue du 14 Juillet, 13300 Salon-de-Provence. WTD in prep.

Antique, secondhand stores

59330—TOGO—Used clothing, approx. 2,000 bales yearly. Quotations c.i.f. Lome. Ets. Atlantic (I, D), 38, Ave de la Libération, B.P. 2069, Lome. WTD in prep.

Services

89990—THAILAND—Technical know-how on making read-out-tubes (fluorescent type) for desk calculators. Elcom Research Ltd., Attn: Jonas Eddy, Chairman or Gowit Jira, Pres. (M), Sukhumvit Ave., Bangchak, Bangkok. WTD in prep.

Agencies

Specific foreign firms have expressed interest in agency agreements for the products listed below. Exclusive agencies for these products are wanted only if specified.

Meat products

20118—CANADA—Canned meats. Shafer-Haggart Ltd. (importer, dist.), 402 West Pender St., Vancouver 3, B. C. WTD 9/72.

Canning, preserving foods

20310—CANADA—Canned fish. Shafer-Haggart Ltd. (importer, dist.), 402 West Pender St., Vancouver 3, B. C. WTD 9/72.

20310—ETHIOPIA—Canned, cured seafoods. Achkar Private Ltd. Co. (importer, dist., agent), Dejazmatch Nassibou Zone, P.O. Box 100, Addis Ababa. WTD 8/72.

20331—CANADA—Canned fruits. Shafer-Haggart Ltd. (importer, dist.), 402 West Pender St., Vancouver 3, B. C. WTD 9/72.

20332 — CANADA — Canned vegetables. Shafer-Haggart Ltd. (importer, dist.), 402 West Pender St., Vancouver 3, B. C. WTD 9/72.

20371—CANADA—Frozen fruits. Shafer-Haggart Ltd. (importer, dist.), 402 West Pender St., Vancouver 3, B. C. WTD 9/72.

20372 — CANADA — Frozen vegetables. Shafer-Haggart Ltd. (importer, dist.), 402 West Pender St., Vancouver 3, B. C. WTD 9/72.

Grain mill products

20423 — CANADA — Pet foods. Shafer-Haggart Ltd. (importer, dist.), 402 West Pender St., Vancouver 3, B.C. WTD 9/72.

Food preparations

20999 — CANADA — Health foods (all kinds). Shafer-Haggart Ltd. (importer, dist.), 402 West Pender St., Vancouver 3, B. C. WTD 9/72.

Broad woven fabric mills, cotton

22117 — AUSTRIA — Home decorating fabrics, including curtain and drapery materials, upholstery cloth, etc. Quality products only. Catalogs, samples, price quotations requested. Industrie-Service Verkaufs-u Beratungs, Ges.m.b.H. (I, A, D), Bahnhofstrasse 9, A-6850 Dornbirn. WTD in prep.

Broad woven fabric mills, manmade fiber, silk

22218 — AUSTRIA — Home decorating fabrics, including curtain and drapery materials, upholstery cloth and similar items. Quality products only. Catalogs, samples, price quotations requested. Customers expected to place bulk orders for 1973 within next eight weeks. Industrie-Service Verkaufs-u Beratungs Ges M.b.H. (I, A, D), Bahnhofstrasse 9, A-6850 Dornbirn. WTD in prep.

22219—HONG KONG—Curtain fabrics. Jardine Matheson & Co., Ltd., Import Dept. (importer, agent, dist.), Union House, Chater Road. WTD 1/72.

Sawmills, planing mills

24211—ITALY—Pitch pine, douglas fir, hemlock boards. Giovanni Ferro (I, A), Via Provinciale 112, 14054 Castagnole Lanze Asti. WTD 10/72.

24212—NETHERLANDS—Sawn timber, hardboards and softboard. Exclusive representations for Netherlands or Western Europe. C. V. Eduard van Leer (A), 75 Rokin, Amsterdam. WTD 9/72.

Pulp mills, products

26112 — NETHERLANDS — Bleached, semibleached and unbleached softwood and hardwood Kraft pulp. Exclusive representations for Netherlands, European Common Market or Western Europe. C. V. Eduard van Leer; Attn: K. Torenstra (A), 75 Rokin, Amsterdam. WTD 9/72.

Paper mills

26216—GUATEMALA—Office and writing paper. Catalogs, quotations requested. Walter Kuhn—Servicio Auxiliar de Empresas (agent), Apartado Postal 1013, Guatemala City. WTD 10/72.

Paperboard mills, products

26311 — GERMANY — Kraftliner. Frich Dechant (agent, importer), 40 Froehnstr., 6780 Pirmasens. WTD 10/72.

Converted paper, paperboard products

26410 — GERMANY — Coated wrapping paper. Erich Dechant (agent, importer), 40 Froehnstr., 6780 Pirmasens. WTD 10/72.

26426 — SIERRA LEONE — Retail egg cartons which fold into 3 six egg sections; i.e., total capacity each carton 18 eggs. Feed Mill Products (SL) Ltd. (I, A, R, M), Kissy Dockyard, N.C.C. Compound, Freetown. WTD in prep.

Industrial chemicals

28152 — AUSTRIA — Synthetic organic dyes for paper industries in Eastern Europe. Specifications, price quotations requested. Baerenchemie Ges.m.b.H. (I, A), Ungargasse 3, A-2700 Wiener Neustadt. WTD in prep.

28185—SPAIN—Reagents grade organic chemicals for laboratory analysis. Gervi, SA (I, D), Europa, 160, Barcelona 14. WTD in prep.

28199—SPAIN—Reagents grade inorganic chemicals for laboratory analysis. Gervi, SA (I, D), Europa, 160 Barcelona 14. WTD in prep.

Soap, detergents, cleaning preparations, perfumes, cosmetics

28413—TOGO—Soap bars, chips, flakes, approx. 200 cases monthly. Quotations c.i.f. Lome. Ets. Atlantic (I, D, A), 38, Ave. de la Libération, B.P. 2069, Lome. WTD in prep.

28420—UNITED KINGDOM—Domestic and industrial hygiene and maintenance products including detergents. Odex Racasan, Ltd. (M.D.), Ellesmere Port, Wirral, Cheshire L65 4DP. WTD in prep.

Chemical products

28911—AUSTRIA—Sizes, coatings for paper industries in Eastern Europe. Offers only from firms supplying entire range of products. Specifications, price quotations requested. Baerenchemie Ges.m.b.H. (I, A), Ungargasse 3, A-2700 Wiener Neustadt, WTD in prep.

28993—AUSTRIA—Water pollution control and treatment chemicals and compounds, especially for paper and pulp, foundry, and metal industries in Eastern Europe. Specifications, price quotations requested. Baerenchemie Ges.m.b.H. (I, A), Ungargasse 3, A-2700 Wiener Neustadt. WTD in prep.

Petroleum refining

29110—BANGLADESH—Petroleum, petroleum products including crude oil. Bengal Engineering Corp., (I, A, M, Exporter), 59 Dilkusha Commercial Area, Dacca-2. WTD in prep.

Plastic products

30798—SWITZERLAND—Plastic cards with magnetic stripes, photo, identification cards, badges, card-key, access control cards. Exclusive sales rights. Farrington AG (I, A, D), Friedaustrasse 23, Ch-8040 Zurich. WTD in prep.

Steel mill products

33167 — INDIA — Steel plates, strips, sheets, etc. R. R. C. Pillai & Sons, Attn: R. R. C. Pillai, Man. Partner (agent), D-78 Defence Colony, New Delhi-24. WTD in prep.

Iron, steel foundries

33233—CANADA—Wear resistant, manganese steel for trackwork. D. W. Hawes, Hawes & Wight, Ltd. (A), 4823 Sherbrooke St., West, Montreal, Quebec. WTD in prep.

Primary smelting, refining of nonferrous metals

33347—THAILAND—Aluminum ingots. Requests c.i.f. Bangkok prices, samples, literature. Far East Merchandise Exchange Inc. (I, D, R), 117 Plabplachai Rd. Bangkok 1. WTD 8/72.

Secondary smelting, refining of nonferrous metals

33414—INDIA—Zinc ingot, shot, plates, sheets, etc. R. R. C. Pillai & Sons, Attn: R. R. C. Pillai, Man. Partner (agent), D-78 Defence Colony, New Delhi-24. WTD in prep.

Rolling, drawing, extruding of nonferrous metals

33512—AUSTRIA—400 mt copper electrolytic cathodes; analyses requested; price quotation, free European port; to be delivered in 13 shipments within one year. Hermine Kornfeld (A), Per Albin Hansson Siedlung Ost. Johann Poelzergasse 2/37/3, A-1100 Vienna. WTD in prep.

33512 — INDIA — Copper bars, sheets, plates, etc. R. R. C. Pillai & Sons, Attn: R. R. C. Pillai, Man. Partner (agent), D-78 Defence Colony, New Delhi-24. WTD in prep.

33560—AUSTRIA—100 mt nickel cathodes, 99.90% Ni plus Co, 0.90% Co max., 0.10% other elements max., dimension 2 in. x 2 in. x ¼ in.; price quotation free European port. Initial order to be followed by annual order of 1,000 mt in 13 shipments. Hermine Kornfeld (A), Per Albin Hansson Siedlung Ost. Johann Poelzergasse 2/37/3, A-1100 Vienna. WTD in prep.

Hand tools, general hardware

34239—UNITED KINGDOM—Hand tools for do-it-yourself automobile market. David Michael (Overseas) LTD. (I, M), Mark House, Westfield Lane, Kenton, Middlesex. WTD 9/72.

34231 — THAILAND — Mechanic's hand service tools. Requests c.i.f. Bangkok prices, catalogs, brochures. Far East Merchandise Exchange Inc. (I, D, R), 117 Plabplachai Rd., Bangkok 1. WTD 8/72.

34294 — THAILAND — Builders' hardware, i.e. padlocks, door locks, locksets, door pulls, door closers, hinges, etc. Requests c.i.f. Bangkok prices, catalogs, brochures. Far East Merchandise Exchange Inc. (I, D, R), 117 Plabplachai Rd., Bangkok 1. WTD 8/72.

Heating apparatus, plumbing fixtures

34336—AUSTRIA—Pipe connections of galvanized steel or brass according to German standards, 8, 10, and 12 mm for straight, angular, T, and cross couplings. All screwed couplings, outside/inside, ¼, ⅜, and ½ in. Also newly developed accessory parts for oil heaters, other than oil burners. New designs for boilers for light distilled fuel oil heating, with built-in automatic burner. Small hot air equipment with fan and built-in automatic burn (max. 40,000 k/cal/hr). Other advanced accessory parts for heating equipment (including liquefied gases). Correspondence should be in German. "Gotec" Apparate-Bau U. Verkaugs Ges. m.b.H. (A, D), An Der Hueblen 4, A-1010 Vienna. WTD 6/71.

34336—NEW ZEALAND—Institutional incinerators, primarily for use by hospitals of 200 to 800 beds, for destruction of hospital wastes including plastics, pathological wastes. Dental & Medical Supply Co. Ltd., Attn: Mr. Obermuller (I, D, A), P.O. Box 1994, Wellington. WTD 8/72.

Fabricated wire products

34813 — GUATEMALA — Furniture springs. Catalogs, quotations requested. Walter Kuhn—Servicio Auxiliar De Empresas (agent), Apartado Postal 1013, Guatemala City. WTD 10/72.

Engines, turbines

35199 — THAILAND — Spare parts for diesel engines. Requests c.i.f. Bangkok prices, catalogs. Phatana Kich Motor Ltd., Partnership (I, D, R), 687 Rama VI Rd., Bangkok. WTD 7/72.

Farm machinery

35221—EL SALVADOR—Wheel tractors and implements for agricultural use. Rene Nuila Macay, Automotores Salvadorenos, S.A. (Autosal), (importer, dist.), Calle Ruben Dario 1003, Sal Salvador. WTD in prep.

Construction, mining, materials handling machinery, equipment

35316 — NETHERLANDS — Bituminous distributors for roadbuilding. Catalogs, descriptive materials requested. Rotim N. V. (I, D), Hoenstraat 1, The Hague, Attn: Mr. Van Der Zwart. WTD in prep. Firm expects to place relatively large order within few months.

Metalworking machinery

35482 — THAILAND — Power-driven hand tools. Requests c.i.f. Bangkok prices, catalogs, brochures. Far East Merchandise Exchange Inc. (I, D, R), 117 Plabplachai Rd., Bangkok 1. WTD 8/72.

35485 — SWITZERLAND — Wire, cable drawing, weaving, marking, winding, fabricating machinery, equipment. Commerce & Service AG (A, consulting engineers), Forchstrasse 34, P.O.B. 230, Ch-8032 Zurich. WTD in prep.

Special industry machinery

35540 — NETHERLANDS — Paper and paperboard converting equipment, machinery; related machinery for paper industries. Exclusive representations for Netherlands or Western Europe. C. V. Eduard van Leer; Attn: K. Torenstra (A), 75 Rokin, Amsterdam. WTD 9/72.

35593—SWITZERLAND—Plastics working machinery, extrusion, injection molding, plastic tube, other large industrial plastics working machinery. Commerce & Service AG (A, consulting engineers), Forchstrasse 34 P.O.B. 230, Ch-8032 Zurich. WTD in prep.

35593—SWITZERLAND—Plastic, photo cards laminating, sealing machinery. Exclusive sales rights. Farrington AG (I, A, D), Friedaustrasse 23, Ch-8040 Zurich. WTD in prep.

35594 — SWITZERLAND — Rubber-working machinery for manufacture of consumer, industrial rubber products, excluding tires. Commerce & Service AG (A, consulting engineers), Forchstrasse 34, P.O.B. 230, Ch 8032 Zurich. WTD in prep.

General industrial machinery

35673—GERMANY — Cartridge heaters, similar dielectric heating elements other than tubular heaters. Eltra K. G. Leicht & Trambauer, Attn: Herr Ing. Hammecke (dist., mfr.), 17 Buechnerweg 6102 Pfungstadt. WTD 10/72.

35690—NEW ZEALAND—Gas industry equipment such as burners, equipment, components for domestic and industrial use and associated repair and servicing equipment. Catalogs, descriptive materials requested. William W. Wallace (importer, agent), 15 Bassett Rd., Remuera, Auckland 1. WTD in prep.

Office, computing, accounting machines

35731 — SWITZERLAND — Mechanical readers, other mechanical data capture units in connection with magnetic cards, plastic cards, badges, other data carrying devices. Farrington AG (I, A, D), Friedaustrasse 23, Ch-8040 Zurich. WTD in prep.

35733 — SWITZERLAND — Electronic data processing equipment—peripherals, automation processes, EDP controls for industry, except business machines. Commerce & Service AG (A, consulting engineers), Forchstrasse 34, P.O.B. 230, Ch-8032 Zurich. WTD in prep.

35741 — SWITZERLAND — Electronic cash registers, 220 v, 50 cycle A.C. Buro-Furrer AG, Attn: Werner Thalmann (I, A, D), Hardturmstrasse 76, POB, Ch-8021, Zurich. WTD 9/72.

35791—SWITZERLAND — Electric time recording and stamping machines, systems, 220 v, 50 cycle A.C. for office use. Buro-Furrer AG, Attn: Werner Thalmann (importer, agent, dist.), Hardturmstrasse 76, POB, Ch-8021, Zurich. WTD 9/72.

Service industry machinery

35820—PORTUGAL—Garment marking machines; tumblers; rotary double board garment presses, air and steam heated: Manikins for air and heated steam pressing jackets and gowns. Azevedo & Pessi, Lda. (I, A), Rua Nova do Almada 46, Apartado 248, Lisbon 2. WTD in prep.

35892—AUSTRIA—Water pollution control equipment for paper and pulp, foundry, and metal industries in Eastern Europe. Descriptions, price quotations requested. Baerenchemie Ges.m.b.H. (I, A), Ungargasse 3, A-2700 Wiener Neustadt. WTD in prep.

35892—JAPAN—Equipment, systems for disposition of sea water pollution by oil and floating trash. Catalogs, descriptive materials requested. Japan Beilhack Distributors, Ltd. (I, A, D), Yamade Bldg., 11-13, Ginza 8-Chome, Chuo-ku, Tokyo. WTD in prep.

35892—NETHERLANDS — Wastewater treatment equipment. Exclusive representation for Benelux. Zwaans N.V., Attn: Mr. Van Oel (importer, dist., mfr., exporter), Hoorn 75, Alphen a/d Rijn. WTD in prep.

35892 — SWITZERLAND — Equipment and systems for prevention, elimination or removal of air, water pollution in industry; waste processing, recovering equipment, reclaiming machinery. Commerce & Service AG (A, consulting engineers), Forchstrasse 34, P.O.B. 230, Ch-8032 Zurich. WTD in prep.

Electrical industrial apparatus

36231—NORWAY—Machinery for welding oil pipe up to 25" diameter (seam welding). Anton Rosenberg (importer, agent), Mollendalsveien 8, 5000 Bergen. WTD in prep.

Household appliances

36343—SWITZERLAND—Portable, electric household ice cream making machines (possibly 220 v., 50 cycle A.C.). Turmix AG, Attn: Th. Specker (D, M), Florastrasse 19, Ch-8700 Kusnacht. WTD in prep.

Radio, television receiving sets

36510—JAPAN—Speaker systems, amplifiers, cartridges, etc. Electrori Co., Ltd. (importer), Kitano Arms, 16-15 Hirakawa-cho 2-Chome, Chiyoda-ku, Tokyo. WTD in prep.

36515 — JAMAICA — Radio speakers, speaker systems. Quotations, brochures requested. K. G. Radio Sales & Services Ltd. (D, R), 84 Slipe Rd., Kingston 5. WTD in prep.

Communication equipment

36620—GERMANY—Closed circuit television systems for schools and industrial application; two-way intercom systems and radio telephones. A. E. Rippel & Co. (A, D, I), 70 Trierer Str., 6601 Heusweiler. WTD 10/72.

36623—SWITZERLAND—Badge reader systems, card-key systems, card operated access, doorway control systems, commercial and industrial security, identification systems. Exclusive sales rights. Farrington AG (I, A, D), Friedaustrasse 23, Ch-8040 Zurich. WTD in prep.

36626 — DENMARK — Ultrasonic signal equipment. Catalogs, descriptive materials requested. Alex Rasmussen & Co. (I, A), 14 Ejderstedgade, Dk 1761 Copenhagen V. WTD 10/72.

36629 — JAPAN — Aviation equipment: emergency transmitters, automatic flight locators, distant measuring equipment. Electrori Co., Ltd. (importer), Kitano Arms, 16-15 Hirakawa-cho 2-Chome, Chiyoda-ku, Tokyo. WTD in prep.

Electronic components, accessories

36741 — JAMAICA — Transistors, semiconductors. Quotations, catalogs requested. K. G. Radio Sales & Services Ltd. (I, D, R), 84 Slipe Rd., Kingston 5. WTD in prep.

36790—JAMAICA—Television antennas, radio tubes, electronic equipment spare parts. K. G. Radio Sales & Services Ltd. (I, D, R), 84 Slipe Rd., Kingston 5. WTD in prep.

Electrical machinery, equipment, supplies

36930—SPAIN—Electrotherapeutic, electromedical apparatus. Gervi, SA (I, D), Europa, 160, Barcelona 14. WTD in prep.

36944—THAILAND — Automotive spark plugs. Requests c.i.f. Bangkok prices, catalogs. Phatana Kich Motor Ltd., Part. (I, D, R), 687 Rama VI Rd., Bangkok. WTD 7/72.

Instruments for measuring, controlling, indicating physical characteristics

38210 — NORWAY — Positive displacement meters for liquid flow measurements preferably having accuracy of minimum plus or minus 0.5%; i.e., suitable for approval by "weight & measure authorities"; also other related instruments. Thorolf Gregersen A/S (I, A), Tollbodgaten 24 Oslo 1. WTD in prep.

38213—AUSTRIA—Instruments to control and analyze pollution of water by paper and pulp, foundry, and metal industries in Eastern Europe and for continuous quality control. Technical descriptions, price quotations requested. Baerenchemie Ges.m.b.H. (I, A), Ungargasse 3, A-2700 Wiener Neustadt. WTD in prep.

38213 — NETHERLANDS — Testing, analyzing equipment for laboratory use in paper industries. Exclusive representations for Netherlands or Western Europe. C. V. Eduard van Leer; Attn: K. Torenstra (A), 75 Rokin, Amsterdam. WTD 9/72.

38213—NEW ZEALAND—Positive displacement meters, 100 to 600 litres per min.; turbine meters of all sizes. Production Engineering Co. Ltd. Attn: J. R. Williams, Gen. Mgr. (importer, agent, mfr.), Box 88, Marton. WTD in prep.

38216 — FRANCE — Regulators, recorders, measuring indicators, pneumatic regulating instruments. Automatisation-So Gemo (importer, mfr.), B.P. 78, 87-St. Junien. WTD 11/71.

Surgical, medical, dental instruments

38410—GERMANY—Ultrasonic medical, surgical instruments, equipment. ATOMIKA Technische Physik GmbH (M, A), D-8000 Muenchen 13, Bauerstrasse 19. WTD in prep.

38410—SPAIN—Surgical and medical instruments and apparatus, including disposable hypodermic syringes, needles. Gervi, SA (I, D), Europa, 160, Barcelona 14. WTD in prep.

38421 — SPAIN — Surgical, orthopedic, prosthetic appliances, supplies. Gervi, SA (I, D), Europa, 160, Barcelona 14. WTD in prep.

Ophthalmic goods

38513—KOREA—Ophtalmic lenses. Requests quotations, catalogs. Boryoong Trading Co. (A), 22-5, 1-Ka, Chungmuro, Chung-ku, Seoul 100. WTD in prep.

Watches, clocks, parts

38711 — SWITZERLAND — Payroll, job time recording clocks, electric time stamps, 220 v, 50 cycle A.C. for office use. Buro-Furrer AG, Attn: Werner Thalmann (importer, agent, dist.), Hardturmstrasse 76, POB, Ch-8021, Zurich. WTD 9/72.

Jewelry, silverware, plated ware

39110 — AUSTRALIA — Jewelry — all types; precious and semi-precious gemstones; mineral specimens. Tasmanian Gems & Minerals Pty. Ltd. (importer, dist., retailer), P.O. Box 63, Georgetown, Tasmania, 7253. WTD 2/72.

Manufacturing industries

39999 — CANADA — Non-food items for supermarket trade. Shafer-Haggart Ltd. (importer, dist.), 402 West Pender St., Vancouver 3, B. C. WTD 9/72.

Wholesalers

50930—AUSTRIA—Iron and steel production scrap in quantities of up to 2 million gross tons. Analytical reports showing content of sulphur, phosphor and slag requested. Quotations c.i.f. Rijeka. Wolfgang Podlipny, Handelsagentur (A), Gablenzgasse 100XI, A-1160, Vienna. WTD in prep.

Algeria Announces Tenders On VHF Radio Equipment

The Service Technique Et Du Material De L'Enema has issued Tender No. 7-72 for the supply and installation of VHF radio equipment. Bid deadline is December 15. Bid should offer three high gain VHF stations 118-136 Mhz each station comprising two transmitters and two receivers, antennae and 24 volt power supplies.

Copies of tender announcement and specifications are available from the Service Technique Et Du Material De L'Enema (Establissement National Pour L'Exploitation Meteorologique Et Aeronautique) 3 Rue Kaddour Rahim, Hussein-Dey, Algiers or on a short-term loan basis to firms located in the U.S. from the Communications-Electronics Division, BDC-720, Rm 1112, U.S. Dept. of Commerce, Washington, D.C., 20230, ★(202-967-4822).

Turkey Announces Tenders For Automatic Test Equipment

Supply of four exhaust gas analyzers; compression loss testers for cylinders up to 12" bore; three sets wheel aligners; and more. Tender No. 72-28L-42, bid deadline, November 14. Invited by Devlet su Isleri Genel Mudurlugu, Makina ve Ikmal Dairesi Baskangwgi, Yucetep Mahallesi, Mlatepe, Ankara, Turkey. Specifications are available for $4. per set at Modern Translation Bureau, Karanfil Sokak, 49/2, Yenisehir, Ankara, Turkey.

Future Construction Abroad

FRANCE — The recent Franco-British agreement to go ahead with final studies on the Channel Tunnel project prior to actual preliminary digging is a fairly good sign that the project is on. The current timetable for construction of the tunnel is as follows: June 1973, Commencement of preliminary digging; 1973-75, Preliminary work—construction of vertical shafts and part of the service tunnel; 1975-77, Main work—construction of the service tunnel and the two main rail tunnels; 1977-80, Final work—completion of the main tunnels and terminal facilities. The two private consortiums financing the tunnel's research and construction are Channel Tunnel Co. in the United Kingdom, and La Societe Francaise du Tunnel Sous la Manche in France. Actual construction will be planned and contracted out separately. The British firms, Cooper Brothers Ltd. and Rio Tinto Zinc Development Ltd. have been hired to do the engineering work and call for contract bids. The French engineering firms SETEC (Societe d'Etudes Techniques et Economiques) and SITUMER are undertaking a parallel function.

Firms wishing to perform the **preliminary work** on the French side should submit prequalification data **before the end of October.** The bids themselves will be requested in March. Bidding for the second stage of construction probably will not take place until late 1974. On the British side, bids will be solicited in similar fashion, on roughly the same timetable.

Prequalification data can be addressed to Jean-Pierre Lajeat, chief engineer, SITUMER. Tour Gamma, 193-197 rue de Bercy, Paris 12.

CANADA—Allarco Developments Ltd., of Edmonton, announced Sept. 14 that it would construct a C$17 million methanol plant in Medicine Hat, with construction work to commence before the close of 1972. The petrochemical plant proposed by the company is designed to be the largest of its kind in Canada, and will produce 600 tons of methanol a day. Medicine Hat is a federally designated area and the company reportedly will be given a C$1.3 million federal industrial incentive grant to help build the plant.

ARGENTINA—Industrias Rio Uruguay S.A., Alberdi 511, Concepcion del Uruguay, Provincia de Entre Rios, which is in the process of formation, has requested the assistance of U.S. firms interested in supplying engineering, know-how and equipment for a plant for the industrialization of agricultural residues from corn, sorghum and sunflower stalks, flax, wheat, rice and oat straw. Initial estimates indicate a daily processing of 100 tons of residues. The finished product will result in proteins for human and animal consumption as well as the production of raw material for the manufacture of fertilizers. The Government of the Province of Entre Rios is backing the firm, and as soon as the feasibility study of the project is submitted to the author-

ities, the Provincial Government would be in a position to endorse the project as of primary interest to the Province. Write directly to Ing. Edelmiro P. Godino, Callao 44, Buenos Aires.

BOLIVIA — The telephone company of Santa Cruz has announced that it is studying a project for the amplification of its system by **4,000 lines of the central and 6,000 lines of the network.** A call for bids is expected soon. The telephone company desires that U.S. manufacturers participate in the bidding and should communicate directly with them at Cooperativa de Telefonos Automaticos de Santa Cruz de la Sierra Ltda., "COTAS" Ltda., Casilla 567, Santa Cruz de la Sierra, Bolivia. WTD 3/72.

TAIWAN—The Taiwan Power Company is advertising for the procurement of the following **transmission line and switchyard equipment,** to be installed with a 375 MW thermal generating unit (unit No. 4 of Talin Power Station, Kaohsiung, Taiwan) under an IBRD loan: six 69 kv oil immersed, three-winding potential transformers; protective and auxiliary relays; switchboard meters, instruments and accessories; line and insulator hardware: galvanized steel pipe bus supports; bus support insulators and fog-type suspension insulators; tubular aluminum and cable bus fittings and conductor accessories. Manufacturing firms, of the foregoing type equipment, are advised to obtain bidding documents from Gibbs & Hill, Inc., 393 Seventh Ave., New York, N.Y. 10001, Attn: Mr. J. D. Scholar.

ICELAND — The State Electric Power Works (Rafmagnsveitur Rikisins, Laugavegur 116, Reykjavik) is currently preparing complete specifications for a small, **5.7 megawatt hydroelectric power station on the Mjolka River** in Arnarfjordur in the northwestern part of Iceland. The completed specifications should be available around Jan. to qualified suppliers who express an interest **prior to Nov. 1.** A fairly detailed booklet on the project "Mjolka II Preliminary Information Booklet" is available upon receipt of a written request and $15. Inquiries may be directed to Mr. V. Thoroddsen, Gen. Mgr., address above. This project will include a penstock, turbine, generator, and transformer and switchgear, control systems equipment, and accessories. The construction portion of Mjolka II has been reserved for Icelandic contractors only. The construction of two dams, a spillway, intake and supports for the upper part of the penstock has been completed. Of the new equipment, a horizontal shaft Pelton turbine is recommended by the purchaser. The generator is to be horizontally mounted, 3-phase, 50 cycle, class F insulated, with a rating of 7,125 KVA.

MEXICO—Petrocel, S.A., a subsidiary of Monterrey's Cydsa Chemical Group, has received authorization from Mexico's National Patrimony Ministry to expand its plant, now under construction at San Martin Texmelucan, Puebla. **to produce dimethyl terphthalate (DMT) and terephthalic acid (TPA) as raw materials for polyester fiber.** Originally planned to cost $32 million and produce up to 60,000 tons of DMT and 30,000 tons of TPA annually, the Petrocel plant is now expected to cost $48.2 million and have a combined production of 110,000 tons per year. U.S. firms should contact Petrocel, S.A. at its corporate headquarters, Apartado Postal 1124, Monterrey, N.L.

SPAIN—The Minister of Public Works recently declared that if the 60s were the years of hydraulic projects, the 70s will be the decade of transportation infrastructure in Spain. Earlier this year the Government of Spain promulgated a law regulating tollroad concessions. Privately-financed, constructed, and operated tollroads will comprise a major portion of **7,000 km. of superhighway** contemplated under the recently published National Superhighway Plan. This Plan, extending into the early 1980s, involves a total expenditure of roughly $9.5 billion. Potential U.S. interest in this program primarily arises from investment opportunities implicit in providing the financing for tollroad construction, either as a lender or as a participant in the operating corporation. A road construction program of this magnitude will continue to offer major export opportunities to U.S. suppliers of heavy equipment. Additional information can be obtained from the U.S. Department of Commerce, Trade Opportunities Division, BIC-831, Rm 4813, Washington, D.C. 20230.

SWITZERLAND — The Swiss Federal Council proposed to the Federal Assembly that the Swiss Confederation invest 568 million Swiss francs for the development of the **Zurich subway.** According to recent calculations the cost of the first 27.5 km.-subway line, which will take about 13 years to complete, will be approximately SF 1.250 million. A follow-on subway line, which will be completed toward the end of the 1980s, is expected to cost SF 819 million.

ARGENTINA-PARAGUAY — Prefeasibility studies of the joint **Argentine-Paraguayan hydroelectric project at Yacyreta-Apipe** on the Parana River are largely complete. Three alternate construction plans have been proposed to the Mixed Technical Commission charged with project direction. Plans call for bid letting by late 1974, construction to begin in early 1975 and completion of the project including installation of 30 generator units by 1982. U.S. equipment suppliers and construction firms should maintain contact either with Harza Engineering Co., 400 W. Madison St., Chicago. Ill. 60606, or Contra. Alm. Raul Guttierez Yegros, Delegado del Paraguay, Comision Mixta Technica de Yacyreta Apipe, Ministerio de Defensa, Asuncion, Paraguay, or with the Commission's office in Buenos Aires.

NIGERIA—The Federal Military Government (FMG) has approved feasibility studies for **reconstruction and development of 18 airports** within Nigeria by the Netherlands Airport Consultants (NACO) under a bilateral technical assistance agreement with the Netherlands Government. According to the press release, the development scheme envisages an airport in each of the 12 state capitals capable of landing at least a Boeing 737 type of aircraft. Maiduguri is to be designed for a Boeing 707. and Lagos, Kano and Port Harcourt for the jumbo-jet Boeing 747 type. In addition to the state capitals, airports are to be developed at Yola, Makurdi, Gusau, Zaria, Warri, and Oshogbo. This program will involve the lengthening, strengthening and resealing of existing runways. taxiways. and aprons, or the building of new ones, depending on the needs of the airfields. New terminal areas will also be built or existing ones improved, and the entire aerodrome system in the country will be equipped with adequate and efficient navigational aids, including field lightings and communication links. Construction on all 18 projects should begin soon. The FMG hopes that, with the exception of the Lagos International Airport, which may not be completed until early 1977, all will be completed four years from now, and more than half within two and a half years. Interested U.S. firms may contact F.M.C. Obi, Ministry of Transport, Lagos.

LIBERIA—The Government was granted a credit of $7.2 million from the International Development Association (IDA) to upgrade the country's **educational system.** The total cost of the project is $9.6 million. The project consists of construction and equipping of two new high schools and a new college of agriculture and forestry; extension of a teacher training institute including construction of a demonstration school; equipment for service and technical teacher training.

KOREA — The Central Federation of Fisheries Co-operatives (CFFC) needs information for use in preparing specifications for the forthcoming invitation to bid for **eight 400 G/T skipjack poleline vessels** to be purchased through international competitive bidding. CFFC considers that the vessels under this project should have adequate speed and power, and be designed for deepsea fishing with relatively large storage spaces, even at the expense of living space. These ships should also be equipped with the latest electronic equipment and facilities for live bait transport from temperate to tropical seas. CFFC is also interested in receiving specifications, brochures and quotations for material to be used in building eight 120 G/T trawlers as well as for 150 marine engines, 150 to 300 hp. Interested U.S. firms should get in touch with Duk-Yup Kim, president, Central Federation of Fisheries Co-operatives (Attn: In-Sun Kim, asst. mgr., Foreign Loan Dept.), #88 Kyongwoon-dong, Chongro-ku, Seoul 110. Should a U.S. firm require payment for any of the above information or material, please obtain prior orders from CFFC before sending such materials.

CANADA—G. E. Pearson, president of the Edmonton Chamber of Commerce, Edmonton, Alberta, states that within the next 20 years, **oil sands plants in the Fort McMurray area of Alberta** will annually be spending C$1 billion for supplies. He said that oil company representatives had told him that over the next 20 years about 20 Syncrude-sized plants will be built to extract oil from the Athabaska Oil Sands, an area containing an estimated 700 billion barrels of oil. The proposed plants would cost approximately C$500 million, making a total investment of C$10 billion in the Fort McMurray area. The only oil sands plant currently operational is Great Canadian Oil Sands Ltd. (GCOS), and this company currently is spending C$23 million annually on supplies and equipment. GCOS is believed to be spending 10 percent of its capital investment each year on supplies and equipment. If this ratio is applied to the proposed new plants the annual expenditure for supplies and equipment for the industry in the Fort McMurray area would be in the range of C$1 billion. GCOS's head office is 85 Bloor St. E., Toronto 5, Ontario.

ARGENTINA — The State-owned SOMISA steel plant (operated by Fabricaciones Militares) will put into effect within the next few months the next phase of its expansion to **4 million tons of steel per year** by 1976. Long range plans call for further expansion to 5.5 million tons in 1980. The SOMISA plan calls for three major additions to present capacity: increase in rolling capacity by the addition of a fourth soaking furnace to serve the thin gauge rolling mill (this will increase existing rolling capacity to 1.6 million tons per year of plate up to approx. ½ in. thickness); addition to a slabbing mill; and addition of a wide plate mill capable of rolling plate 3.5 meters wide and up to 20 meters long. The capacity of this mill will be 400,000 tons. It will use ingots of up to 32 tons from SOMISA's own production. The plans also call for a new sintering plant with capacity of 5,500 tons per day. Later additions will include a third calcining kiln and a third distillation column for the oxygen plant.

SOMISA also plans to increase the capacity of the two existing converters, rather than adding a third converter. The third converter will not be added until after about 1978. One existing converter will be modified by increasing the base from 32 to 34 ft. This will increase its capacity from 4,000 to 5,000 tons per day. The modifications of the other one will consist of greater mechanization in the charging which will increase its capacity from 2.500 to 3,100 tons per day. This phase will involve a total expenditure of about $240 million over a period of 2½ years. About 37 percent of this will be imported content. Call for proposals will be issued within the next two or three months. General Chescotta, President of SOMISA, will seek U.S. Eximbank financing for the equipment imported from the U.S. Interested U.S. firms should contact SOMISA, Belgrano 163, Buenos Aires, as soon as possible.

KOREA — The Government's Economic Planning Board (EPB) and the Ministry of Education (MOE) have announced that the Government is continuing to promote a second International Development Assn. (IDA) loan for **educational projects.** The amount may range from $25 million to $50 million and includes participation by the World Bank. Major use of the loan will be for projects to expand and improve educational facilities of secondary and higher level institutions for vocational training, engineering, agriculture and fisheries. Bid invitations for the needed purchases on a world-wide basis are expected from the Office of Supply (OSROK) over the next four months. Interested U.S. firms may wish to write for further information to the following address: Dr. L. S. Tunkel, Dunwoody Institute, Korea/IDA Project Office, IPO Box 3199, Seoul 100.

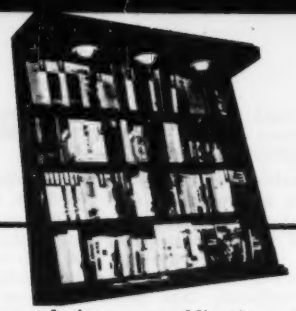
Also, AID signed an agreement on September 13 with Korea for a $2.5 million development loan for the import of educational equipment. The project will be implemented by the Korean Educational Development Laboratory, #26 Samchong-dong, Chongroku, Seoul 110.

FRANCE—A new reception center-office building, "Palais Rivoli", will be constructed next to the present Palais Massena, which it will replace as the reception hall for the Municipality of Nice. The building will cover approximately 2,000 meters and consist of four floors, a mezzanine, a roof garden and an underground parking area. U.S. firms seeking further information should contact either the American Consulate, No. 3 Rue Dr. Barety, Nice, or the architect, G. Buzzi, 73, Blvd. Carlone, Nice.

THAILAND — Major projects of the **Government of Thailand's Harbor Dept.** under the Third Five-Year Economic Development Plan include: 1) *Phuket Deep-Sea Port Development Project.* Rendel Palmer & Triton Co. of England completed the preliminary survey. The project will involve purchase of dredges of hopper and cutter types; construction of a causeway and revetment, and construction of transit sheds, and an oil jetty for loading and unloading petroleum products. 2) *Kantang Deep-Sea Port Development Project.* Kampsax Enterprises of Denmark is expected to complete a master plan and survey within 1972. Depending on the result of the survey and master plan and financing source, the Thai Government will contract for the design and construction work. 3) *Songkhla Port Development Project.* The Japanese engineering team from the Overseas Technical Cooperation Agency completed the engineering survey and also is doing the design work. Depending on the findings of the survey report and the source of financing, the Thai Government will issue a tender for the supervisory engineering and construction work. 4) *Coastal Ports.* The following coastal ports are to be improved and developed: Pak Panang, Surajthani Province, $1 million est.; Satul, Satul Province, $350,000 est.; Chumporn, Chumporn Province, $200,000 est.; Smut Sakorn, Smut Sakorn Province, $250,000 est. In connection with this project, two dredgers may be purchased: one Cutter suction dredger, having a 300-400 cu.-meter-per-hour capacity; one Hopper dredger, having a 300-600 cu.-meter-per-hour capacity. Bidders may be required to furnish long-term financing for the Harbor Dept. for such purchases. 5) *Navigation Training Center.* The Thai Government plans to spend about $2.1 million to establish an Ocean Navigation Training Center to help develop the nation's shipping industry. This project may involve the purchase of a training ship and training equipment. U.S. firms should write to: Senior Lt. Bancha Punyabukkana, Secretary to the Director General, Harbor Dept., Yotha Rd., Talad Noi, Bangkok.

ARGENTINA—Vialidad Nacional (VN), the Argentine National Highway Administration, has an ambitious plan of road building and improvement for 1972-73, totaling about $180 million. This plan, which will be largely carried out by Argentine contractors working for VN, may nevertheless provide trade opportunities for U.S. firms in the supply of road building equipment, in a limited amount of structural steel for bridges and culverts, and in communications and traffic control equipment. A brief summary of VN's plans for 1972-73 can be obtained from the U.S. Department of Commerce, Trade Opportunities Division, BIC-831, Rm 4813, Washington, D.C. 20230. U.S. suppliers seeking further information should contact: Vialidad Nacional, Avda, Maipu 3, Division Licitaciones, 5°, Piso, Buenos Aires.

GREECE—Following is a brief summary of some major construction projects in progress in Greece that may be of interest to U.S. firms: **Public Power Corp. Projects**—The engineering for the first of **four hydroelectric projects** is under way, and PPC is reviewing proposals for the engineering of the remaining three projects. The PPC is also evaluating declarations of interest for the preliminary consultant on the first of eight proposed 600 MW. nuclear power plants. **UN Financed Projects**—Engineering has been completed on the Thessaly groundwater project, and the consultant contract has been awarded to the French firm SOGREAH. The drilling contract for 200 bore holes has been awarded to a local firm. Bids for drilling the remaining 800 wells will be invited shortly. Equipment to be procured in the near future includes pumping units, sprinkler sets, casing tubes and screens. Greece has applied to the World Bank for two further loans for an open ditch project in Macedonia and an extension of the Thessaly project. Doxiades has designed the five technical training centers financed by World Bank; a prequalification bid on construction has been held, and bids for equipment are expected in the near future. World Bank has approved a new $23.5 million loan for the expansion of engineering and science facilities at the University of Patras and for other educational projects. **Industrial Projects** — Three leading Greek firms, Izola, Viosol and Viohalco will join forces in the establishment of a $3.3 million pipe manufacturing plant at Chalkis. The by-laws of Steyr-Daimler-Puch Hellas were signed Aug. 28. The headquarters of the new corporation which will own and operate Steyr's $34 million tractor and truck assembly plant will be located in Thessaloniki. **Transportation Projects** —The Piraeus Port Authority's 1973-77 investment program provides for a total outlay of $112 million broken down as follows: port works—$50.8 million; new buildings—$14.2 million; road construction—$5 million; land purchase —$10.6 million; purchase of equipment— $31.4 million. The program provides also for the expansion of the existing container terminal and the construction of a new one. The Greek engineering firm EDOK-ETER has been awarded the contract to build an $8.9 million concrete railway tie manufacturing plant for the Greek Railway Organization. The facility is scheduled to operate by 1978, and the French firm SATEBA will act as technical consultant. Construction is to begin in early 1973 of Hellenic Shipyards S.A.'s 500,000-metric ton graving dock and marine diesel engine plant. Eleusis Shipyards' new 115,000-ton floating dock will be commissioned in Oct. Plans for a 250,000-ton graving dock have been announced. **Tourism** — The 1973-77 Economic Development Plan foresees a total investment outlay of $1.4 billion in the tourist sector. Private enterprise would be expected to invest $1.2 billion, mostly in new hotels (135,000 beds). and the Government would provide $200 million for tourist infrastructure, training, and promotion. Government of Greece contacts are: Ministry of National Economy, 4th Directorate of State Purchases, Kanningos Sq., Athens; Ministry of Public Works, 7 Themistocleous St., Athens; Ministry of Merchant Marine, Transport and Communications, 49 Syngrou Ave., Athens.



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OFFICE OF MINORITY BUSINESS ENTERPRISE

OMBE outlook. August/September 1972. Monthly publication providing information on the program and activities of the Office of Minority Business Enterprise and others engaged in further opportunities for members of minority groups in the field of business. Free upon request.

NATIONAL BUSINESS COUNCIL FOR CONSUMER AFFAIRS

Tire inflation and the consumer—a program to improve safety and economy. September 1972. 16pp. 40¢.

Violence and the Media. August 1972. 8pp. 20¢.

DOMESTIC AND INTERNATIONAL BUSINESS

BUREAU OF DOMESTIC COMMERCE

Construction review. Vol. 18, No. 8. Annual subscription $6.50 ($1.75 more for foreign mailing). Single copy 55¢. Monthly industry report.

BUREAU OF INTERNATIONAL COMMERCE

Export control bulletin—supplement to Export Control Regulations (ECB-OEC-72). Subject: Export license amendments are processed quicker by Field Offices. 40¢.

International Marketing Information Service

Britain's catering industry offers U.S. business opportunities in hotel and restaurant equipment (IMIS 72-031). 8pp. 10¢.

SOCIAL AND ECONOMIC STATISTICS

BUREAU OF THE CENSUS

Congressional District Data Book

Districts of the 93d Congress

Arkansas (CDDB-93-3). 16pp. 50¢.

Montana (CDDB-93-24). 12pp. 25¢.

Rhode Island (CDDB-93-35). 12pp. 25¢.

Statistical Abstract of the United States: 1972. 93d annual edition. 1044pp. $5.50 (cloth). This abstract is the standard summary of statistics on the social, political, and economic organization of the United States.

Agriculture

1969 Census of Agriculture—Area Reports

Alaska (Volume 1, part 49). 256pp. $2.25 (paper).

Amer. Samoa (Vol. 1, part 54). 40pp. 45¢.

Trust Territory (Vol. 1, part 55). 32pp. 50¢.

Report on cotton ginnings prior to September 1 for the crop of 1972, by States (A10: 72-2). 1972. 1p. 10¢.

Construction and Housing

Housing completions: July 1972 (C22-72-7). Annual subscription $1. Single copy 10¢.

New one-family homes sold and for sale: July 1972 (C25-72-7). Annual subscription $3. Single copy prices: Monthly, 10¢, annual, $2.

Housing starts: August 1972 (C20-72-8). Annual subscription $2. Single copy 20¢.

Housing authorized by building permits and public contracts: July 1972 (C40-72-7). Series C40, $8 per year; $2 more for foreign mailing; single copy (annual), $2; single copy (monthly), 55¢.

1970 Census of Housing

Metropolitan Housing Characteristics

Dallas, Texas. Standard Metropolitan Statistical Area (HC(2)-53). 128pp. $1.

Distribution and Services

Weekly retail sales. Estimated weekly retail sales of retail stores in the United States for week ending October 7 (CB 72-245). 2pp. 10¢.

Foreign Trade

Puerto Rico and U.S. Possessions: April 1972 (FT 800-72-4). 28pp. Annual subscription $2.50 (75¢ more for foreign mailing). Single copy 20¢.

Export and import merchandise: August 1972 (FT 900-72-8). 8pp. Annual subscription (FT 900, 975, 985, and 986 combined) $3. Single copy 10¢.

Waterborne exports and general imports: calendar year 1971 (FT 985-71-13). 24pp. Annual subscription (FT 900, 975, 985, and 986 combined) $3. Single copy 10¢.

Vessel entrances and clearances: 1971 (FT 975-71). 1972. 8pp. Annual subscription (FT 900, 975, 985, and 086 combined) $3. Single copy 10¢

Imports commodity by country: June 1972 (FT 135-72-6). September 1972. Annual subscription $21 ($5.25 more for foreign mailing). Single copy $1.75.

Waterborne exports and general imports: June 1972 (FT 985-72-6). 20pp. Annual subscription (FT 900, 975, 985, and 986 combined) $3. Single copy 10¢.

Indexes of U.S. exports and imports by economic class: 1919 to 1971. 28pp. 40¢.

Governments

City Government finances in 1970-71 (GF 71, No. 4). 110pp. $1.

Quarterly summary of State and local tax revenue: April-June 1972 (GT72 No. 2). 8pp. 25¢.

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Metal cans: summary for 1971 (Series: M34D(71)-13). 14pp. $1.50 per year. Single copy 15¢.

Insulated wire and cable: 1971 (Series: MA-33L(71)-1). 12pp. 25¢.

Farm machines and equipment: 1971 (Series: MA-35A(71)-1). 18pp. 25¢.

Annual survey of manufactures: 1970 (M70(AS)-6.2). **Middle Atlantic Division**—part 2. 25¢. This report is a preprint of a chapter in the Annual Survey of Manufactures: 1970 volume.

Annual survey of manufactures: 1970 (M70(AS)-6.3). **East North Central Division**—part 3. 25¢. This report is a preprint of a chapter in the Annual Survey of Manufactures: 1970 volume.

Annual survey of manufactures: 1970 (M70(AS)-4). Fuels and electric energy used, by industry groups. 25¢. Entire series $7.75.

Annual survey of manufactures: 1970 (M70(AS)-7). Book value of fixed assets and rental payments for buildings and equipment. 25¢. This report is a preprint of a chapter in the Annual Survey of Manufactures: 1970 volume.

Annual survey of manufactures: 1971 (M71(AS)-1P). General statistics for industry groups and industries. 25¢. Entire series $7.75. This report presents preliminary manufacturing establishment statistics for industry groups and industries from the 1971 Annual Survey of Manufactures (ASM).

Population

Population Characteristics

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Estimates of the population of the United States by age and sex: April 1, 1970 to July 1, 1972 (Series: P-25, No. 490). 4pp. 10¢.

1970 Census of Population

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Delaware (PC(1)-D9). 455pp. $3.25.

Oregon (PC(1)-D39). 411pp. $3.50

ECONOMIC DEVELOPMENT ADMIN.

Economic Development. October 1972. Vol. 9, No. 10. Annual subscription $1 (50¢ more for mailing). Single copy 15¢.

SCIENCE & TECHNOLOGY

NATIONAL OCEANIC & ATMOSPHERIC ADMIN.

Marine Fisheries Review. July-August 1972. Volume 34, Nos. 7-8. 64pp. Annual subscription $7 ($2 more for foreign mailing). Single copy 60¢. A comprehensive view of United States and foreign fishing industries—including catch, processing, marketing, research, and legislation.

Fishery statistics of the United States 1969. Statistical Digest No. 63, 1972. 476pp. $4.

Processing EASTROPAC STD data and the construction of vertical temperature and salinity sections by computer (Tech. Report NMFS CIRC-365). 22pp. 30¢.

Key to field identification of Anadromous juvenile salmonids in the Pacific Northwest (Tech. Report NMFS CIRC-366). 10pp. 20¢.

Revised annotated list of parasites from sea mammals caught off the West Coast of North America (Tech. Report NMFS SSRF-647). 28pp. 35¢.

National Ocean Survey

Pacific seamap 1961-70—data for area 15248-14—longitude 152°W to 166°W, latitude 48°N to 54°N bathymetry, magnetics and gravity (Tech. Report Nos. 47). 288pp. $3.50.

Pacific seamap 1961-70—data for area 16648-14—longitude 166°W to 180°W, latitude 48°N to 54°N bathymetry, magnetics and gravity (Tech. Report Nos. 48). 214pp. $3.

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Bibliography on atomic line shapes and shifts—(1889 through March 1972) (Spec. Publ. 366). 165pp. $1.75.

Standard reference materials: the characterization of linear polyethylene SRM 1475 (Spec. Publ. 260-42). 39pp. 45¢. (Reprinted from the National Bureau of Standards—Journal of Research, Section A. Physics and Chemistry, Vol. 76A, No. 2, March-April 1972.

A universal dropout tester for magnetic storage media (Tech. Note 739). 32pp. 35¢.

Structural performance evaluation of innovative building systems (Tech. Note 706). 16pp. 25¢.

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Order the following reports on Government-sponsored research from: National Technical Information Service, 5285 Port Royal Road, Springfield, Virginia 22151. Make check or money order payable to National Technical Information Service. Price of each document is $3, unless otherwise specified. All reports are available in microfiche for 95¢ apiece.

Significant accomplishments in sciences—Goddard Space Flight Center (N72-23324). 1970. National Aeronautics and Space Admin., Washington, D.C., 1972, 253pp. Proceedings of a symposium held at the NASA Goddard Space Flight Center, January 14, 1971.

Urban transportation policies and activities—A report to the Congress of the U.S. (CH-SAM-152). Department of Transportation and Dept. of Housing and Urban Development, June 1972, 45pp.

Management — a continuing literature survey (N72-22966). National Aeronautics and Space Admin., Washington, D.C., 132pp. Selection of annotated references to unclassified reports and journal articles introduced into the NASA Scientific and Technical Information System during 1971.

Environmental indicators for pesticides (PB-210 666). Stanford Research Institute, Menlo Park, Calif. $5.45. 129pp. Studies environmental indicators of pesticides, including consideration of projection, imports, exports, and consumption of pesticides, by type and over time; amount of pesticides found in food, air, water, soil, wildlife, plants, and the human body by type of pesticide and over time; and indirect measures of pesticides utilization as they relate to public health, crop quality and yield, and recreational and esthetic values. Identifies steps that should be taken within government agencies for collection and processing of data necessary for calculation of these indicators.

Identifying on-the-job behavioral manifestations of drug abuse: a guide for work supervisors (PB-211 731). Mobilization for Youth, Inc., New York, N.Y., paper copy $4.50 65pp.

Publicly provided and assisted housing in the U.S.A. (PB-211 708). Urban Institute, Washington, D.C., paper copy $4.85, 83pp. Analyzes U.S. problems and compares U.S. and United Kingdom policies and programs, and discusses various aspects of housing management, including housing management as a profession in the United States.

The social bases for illegal behavior in the student community: first year report (PB-211 657). Scientific Analysis Corp., San Francisco, Calif., paper copy $6, 199pp.

Social impacts of civil aviation and implications for R&D policy (N72-23973). George Washington Univ., Washington, D.C., 223pp.

Report of the Federal Trade Commission on rates of return in selected manufacturing industries 1961-70 (PB-208 764). Federal Trade Commission, Washington. $4.50. 78pp. Contains sections on: (1) rates of return on stockholders' investment for 257 identical companies in 21 selected manufacturing industries, (2) rates of return of the 12 largest companies in 35 industries, 1969-70, (3) rates of return on stockholders' investment (after taxes) for each size group of companies in each of 35 selected industries, and (4) rates of return for 39 selected diversified manufacturing companies, 1966-70.

The ecology of home environments (PB-207 820). U. of Utah. 207pp. Presents normative, baseline data about home environments and discusses patterns of use and family ecological styles in use of home environments.

The closed door: the effect of a criminal record on employment with state and local public agencies (PB-207 680). Georgetown U., Washington, D.C. $6.75. 262pp. Documents the inner dynamics of the criminal justice system as it operates on an individual with a record.

Public regulation of water quality in the United States (PB-208 309). National Water Comm., Arlington, Va. $12.50. 674pp. Considers water pollution control activities of local and substate, state, interstate, and federal levels of government. Scope of control programs, accomplishments and deficiencies, allocation of responsibilities, and means for improving performance of assigned tasks are discussed.

Fabrication and cost evaluation of experimental building brick from waste glass (PB-208 007). Bureau of Mines, Washington. 38pp. Demonstrates technical feasibility of manufacturing building brick from waste glass, analyzes capital and operating costs for the process, and calculates the selling price required for a given return on investment.

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Career patterns and values: a study of men and women in science and engineering (PB-208 305). Columbia U. 263pp. $6.75. Explores barriers faced by women entering careers in science and engineering, and investigates ways in which differential pressures on women result in different choices in their education and family life.

Recycling and ecosystem response to water manipulation (PB-208 669). Michigan State U. 135pp. $5.45. Reviews literature on the impact of water manipulation on the ecosystem and the role of recycling. Topic areas include: extent of manipulation that ecosystems can take without major change; relationships between biota and recycling; recycling and human survival; technical concepts to maintain recycling processes; social, institutional and public attitudes on recycling.

National assessment of trends in water quality (PB-210 669). Enviro Control, Washington, D.C. 52pp. $4.50. Outlines trends in pollution loads (controlling for flow) for oxygen demand, dissolved oxygen, nutrients, salinity, dissolved and suspended solids, and turbidity. The relationship between flow levels and pollution levels is examined.

A literature survey of ocean pollution (AD-743 101). Catholic U., Washington, D.C. $5.45. 116pp. Surveys literature on problems of ocean pollution and identifies areas in which notable deficiencies in knowledge exist.

Measuring the effectiveness of local government services: solid waste collection (PB-209 803). Urban Institute, Washington, D.C. 43pp.

Energy research needs (PB-207 516). Resources for the Future, Inc., Washington, D.C. $13.50. 893pp. Identifies a large number of questions on which research is needed for improved understanding of the long-term situation that confronts the United States, and to devise policies to deal with the situation. Subjects covered include forces that influence energy consumption, the future of domestic mineral fuel reserves, research and development possibilities in energy production and use, environmental impacts of energy production and utilization activities, and public policies which significantly affect energy industry operations.

Special study: bicycle use as a highway safety problem (PB-210 025). National Transportation Safety Board, Washington, D.C. 21pp. Discusses background, magnitude, and significant characteristics of the problem; bicycle configuration, size, and design; responsibility, authority, and actions of Federal agencies; adult bicycling; and bicycle riding as a prelude to automobile driving.

Guide to technical and financial assistance for air pollution control (PB-210 670). Gordian Assoc., New York. $5.45. 147pp. Describes federal, state, and other technical and financial assistance sources which business and industry can use in complying with their abatement obligations. Tax law provisions, sources of low cost financing and special aid, eligibility requirements, application procedures, review and appeal procedures, and sources of technical aid and supplementary information are discussed.

National environmental indices: air quality and outdoor recreation (PB-210 668). Mitre Corp., McLean, Va. $6.75. 263pp. Formulates and computes separate indices of air pollution and outdoor recreation for a number of cities in the United States. Guidelines for implementation of an operational data collection and reporting system to allow routine computation of the indices are given.

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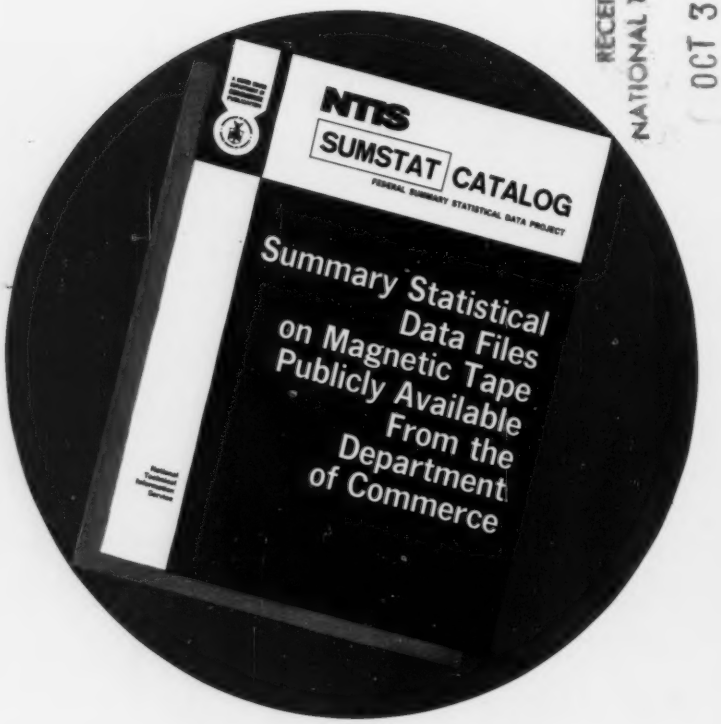
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